

Environmental Monitoring Report

Bi-annual Report (Jul -Dec 2018)

June 2019

Georgia: Urban Services Improvement Investment Program – Tranche 2

Prepared by United Water Supply Company of Georgia LLC for the Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank.

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SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

Project Number: 43405-025

Reporting Period: July-December 2018

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM
(TRANCHE 3)**

(FINANCED BY THE ASIAN DEVELOPMENT BANK)

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

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ABBREVIATIONS

ADB	Asian Development Bank
DC	Design Consultant
DEPRP	Department of Environmental protection, Resettlement and Construction Permit
DIPDR	Department of International Procurement and Donors Relations
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 Sector Improvement Investment Program
IA	Implementing Agency
IEE	Initial Environmental Examination
MFF	Multi-tranche Financing Facility
MoENRP	Ministry of Environment and Natural Resources Protection
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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1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for “Urban Services Improvement Investment Program” (USIIP), Tranche 3 and describes the period of July-December 2018.
2. This report is the 6th Semi-Annual EMR for the T3 of “Urban Services Improvement Investment Program”.

1.2 Headline Information

3. Contractors under USIIP/T3 follow the verbal instructions given by the Supervision Consultant and the UWSCG / USIIP during the environmental monitoring of construction sites, as well as non-conformances issued after the site visits, if necessary, and in most cases improve the situation, develop a corrective action plan and sent along with improved photos of sites. Only 10% of the non-conformances have not yet been resolved during the current reporting period, it is basically the proper organization and cleaning of sites on a regular basis, as well as H&S of workers.
4. All improvements under Kut-01, URE-01 and ABA-01 projects will be recorded in the next EMR January-June 2019.

2 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; and, sewerage improvement works will include sewer network, pumping stations, main collectors and waste water treatment plants.
7. Tranche 3 of the Investment Program includes:
 - Construction of Water Supply and Wastewater Network in Ureki/Phase 3 (URE-01);
 - Construction of Wastewater Treatment Plant in Ureki (URE-02);
 - Construction and Rehabilitation of Water Supply System in Kutaisi/Phase 2 (KUT-01)
 - Construction of New Transmission Pipeline in Abasha (Aba-01)

The following projects are financed under Tranche 3:

8. **¹Construction of Water Supply and Wastewater Network in Ureki/Phase 3 (URE-01).**
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 m³ x 3,000 m³ and 1 x 1,200 m³); 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.
9. 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 wall 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 June 2019. The project is foreseen to serve 35,000 tourists and 5,400 local inhabitants by year 2040.

¹ T1-T3 BAEMRs may have some overlap, due to the financing arrangements of Ure-01 project, which is simultaneously financed by T1,T2 and T3.

- 10. Construction of Wastewater Treatment Plant in Ureki (URE-02).** The project comprises of the construction of new Wastewater Treatment Plant with the capacity of 6,570 m³/day.
- 11.** The contract URE-02 was signed on April 30, 2015 with JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH and Co.KG ProtechnoSrl (Germany) / Aritim (Turkey), the contract was completed on June 9, 2018.
- 12. Construction and Rehabilitation of Water Supply System in Kutaisi/Phase 2 (KUT-01).** The project envisages construction of Kvitiri 973 m³/h capacity and Mukhrani 660 m³/h capacity pumping stations; Reservoirs - construction of Near East and Mukhrani reservoirs with the capacity of 9,000 m³ (2x4,000+1,000). Distribution network - 332.1 km.
- 13.** United Water Supply Company of Georgia signed a contract with SMK Ulusal Insaat Ve Ticaret A.S. (Turkey) for implementation of KUT-01 project on 22 April 2015. The initial date of completion of the contract - June 8, 2018 was extended until April 2019.
- 14. Construction of New Transmission Line in Abasha (Aba-01).** Within the Aba-01 project the following major works will be carried out: approximately 15 km long 500 mm diameter transmission pipeline will be installed from headworks to the town of Abasha, chlorination building will be constructed and the water meter will be installed at the headwork.
- 15.** The contract for implementation of ABA-01 was signed on October 13, 2017 with AS Inshaat–N, LLC (Azerbaijan). The initial date of completion of the contract - June 8, 2018 was extended until July 2019.

2.2 Project Contracts and Management

- 16.** The following agencies are involved in implementing the Investment program: Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) responsible for management, coordination and execution of all activities funded under the loan. MoRDI has overall responsibility for compliance with loan covenants.
- 17.** Ministry of Environmental Protection and Agriculture of Georgia (MEPA). MEPA has the overall responsibility for protection of environment in Georgia. The Department of Permits of MEPA is responsible for reviewing EIAs and for issuance of the Environmental Permits. MEPA is the main state body pursuing state policy in the sphere of environment. Their functions for regulating economic or development activities with regard to environmental protection include:
 - Issuing permits for project development (Environmental Decision)
 - Setting emission limits and issuing surface water intake and discharge consents
 - Responding to incidents and complaint
- 18.** United Water Supply Company of Georgia (UWSCG) is the implementing agency (IA), which is responsible for administration, implementation (design, construction and operation) and all day-to-day activities under the loan. Since September 2018, the Investment Program

Management Office (IPMO) under UWSCG is Project Management Department, the Head of Department is Mr. Giorgi Archaia. Environmental issues are followed by the Department of Environmental Protection and Permits of UWSCG. The head of the department is Ms. Maka Goderdzishvili. Ms. Ketevan Chomakhidze is the Environmental Specialist of USIIP under the Department of Environmental Protection and Permits.

19. UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) – Eptisa under T1. The national and international team of consultants assists UWSCG in the supervision of the construction of subprojects under the USIIP. The SC also provides capacity building training to contractor staff in the management and operation and maintenance of the subprojects. The SC assists UWSCG in ensuring that the subprojects are implemented according to the specified standards. SC assignment also includes the supervising of the implementation of the environmental management plans.
20. All mitigation measures during construction are implemented respectively by the contractor companies: Peri; SMK; As Inshaan-N. Each contractor company have Environmental and safety officers responsible for HSE issues during construction process. Construction companies are monitored by the supervision consultant (Eptisa) environmental specialist – Irakli Legashvili and Environmental Specialist of UWSCG/USIIP Ms. Ketevan Chomakhidze. Environmental Specialists of SC and UWSCG/USIIP conduct routine observations and surveys of project sites, issues non-compliance notes. ES of Eptosa prepares quarterly environmental reports and submits to UWSCG.
21. The Contractor, prior to the onset of the construction, is obliged to conduct a number of studies and develop environmental plans, including “Site Environment Management Plan” (SEMP). Such plans can be further subdivided into Topic Specific or Site Specific EMP’s. The number of such plans will depend upon the type of project, complexity and sensitivity of the receiving environment.
22. Topic Specific EMPs are developed on a topic by topic basis. For example:
 - Waste Management Plans;
 - Traffic Management Plans;
 - Protected Species Management Plans;
 - Water Management Plans.
23. These plans are detailed and set out how the project will address potential issues identified in the impact assessment process and ensure that specific mitigation and monitoring measures are fully implemented. A topic specific environmental management plan will cover all of the project.
24. The environmental specialist of UWSCG/USIIP assists and advise the Department of Environmental Protection and Permits of UWSCG for implementation of USIIP in compliance with the ADB Safeguard Policy Statement 2009 and National Legislation, and oversee the work of DCs and SCs in safeguards compliance. ES supports DEPP in EARF implementation, in particular, reviewing IEE/EIA Reports, overseeing implementation of EMPs, Reviewing and approving SEMP’s and carrying out training and capacity-building activities in cooperation with Supervision Company. The ES prepares Semi-annual and annual environmental monitoring reports and submits to ADB.

25. Department of Environmental Protection and Permits of UWSCG is responsible for the implementation of mitigation and monitoring measures during construction and operation of subprojects under USIIP. Currently DEPP is staffed with a Head of Department and 4 specialists, those are responsible for environmental safeguard and construction permission issues.
26. ADB is the donor financing the Investment Program. Environmental management organization is shown in Figure 1 and Figure 2.

Figure 1: Structure Diagram of the Environmental Management Unit of UWSCG

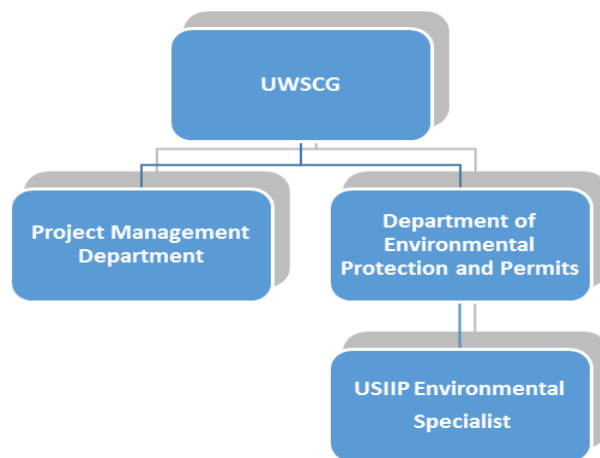
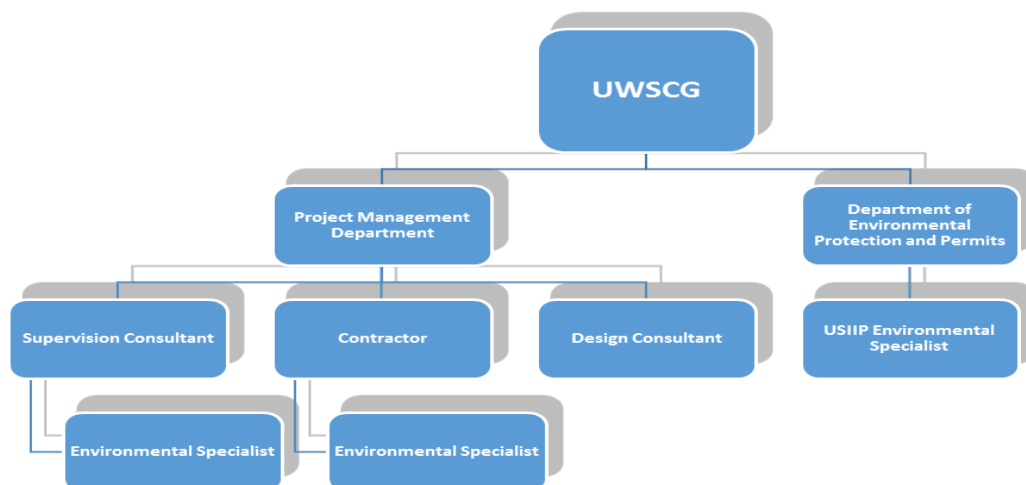


Figure 2: Structure Diagram of the Agencies Involved in Investment Program Implementation



27. A list of main organizations involved in the USIIP/T3 and relating to environmental safeguards is presented in Table 1 below.

Table 1: 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	Head Office, Environmental Specialist, Portfolio, Results, Safeguards and Gender Unit (PSG), CWRD.	Duncan Lang dlang@adb.org
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili +995 595 070442 nnadashvili@adb.org
		ADB RETA International-Regional Environmental Consultant	Keti Dgebuadze +995 577232937 ketdgeb@yahoo.com
Borrower	UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Projects Management, Head	Mr. Giorgi Archaia E-mail: G.Archaia@water.gov.ge Tel: +995 577 380213
Borrower	UWSCG/USIIP/T3	Environmental Specialist	Ms. Ketevan Chomakhidze Tel: +995 577 380309

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
			E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	A Consortium of Consulting Firm led by Eptisa Servicios de Ingenieria 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
Contractor URE-02	JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH and Co.KG ProtechnoSrl (Germany) / Aritim (Turkey)	Environmental H&S Specialist	Mr.Nikoloz Meparidze Tel: +995 599 346821 E-mail: niko@telenet.ge
Contractor URE-01	JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan)	Environmental H&S Specialist	Mr.Mamia Mikiahvili Tel: +995 551 577 728 Email: mmamia@yandex.ru
Contractor KUT-01	SMK Ulusal Insaat Ve Ticaret A.S. (Turkey)	Environmental Specialist	Ms. Natia Babukhadia E-mail: natiiibab@gmail.com Tel: +995 595 150444
		H&S Specialist	Mr. Mamuka Darakhvelidze E-mail: mamuka.darakhvelidze@gmail.com Tel: +995 592 87 0087

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
ABA-01	AS Inshaat-N, LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Nodar Usupishvili E-mail n.usupashvili@gmail.com Tel: +995 577 68 16 71

2.3 Project Activities during Current Reporting Period

28. During the reported period construction activities were implemented only under KUT-01, URE-01 and ABA-01 Projects, therefore only KUT-01, URE-01 and ABA-01 sub-projects are reported in this Semi-annual EMR. Contractors have intensified all activities to improve the progress of the works on sites. The Engineers gave processed frequent instructions to the Contractor for the planning and outstanding documents preparation which shall ensure steady improvement of the works progress.

2.3.1 Project Activities during the Reporting Period

URE-01:

Water Supply Pumping Station

29. At Pumping Station excavation and sheet piling works and installation of ground drainage system is ongoing. Pipelines were connected to the PSs. Plastic chambers and precast concrete cabinet are installed.

Wells & Well Field:

30. Old transformer is demolished and new cabinet of 400 kW is installed, borehole pumps in to well 5 and 6 are installed. Electrical panels are on site and installed.

Sewer Pump Station:

31. There has been little progress during the last months of the reporting period. The Contractor informed EPTISA that they are waiting for more materials and work will recommence when these arrive.
32. Mechanical works are almost completed, waiting for the missing parts to be transferred. Electrical materials are not at site yet so the electrical works are not started.

Reservoir #3:

33. Electrical work has not yet begun, only reinforced concrete work was carried out.

34. The overall progress of the contractor during July-December 2018 for the project URE-01 is presented in table 2 below:

Table 2: URE-01, project progress during July-December 2018

Ure-01	Sites
	Construction of Reservoir #1
Works undertaken during July-December 2018	Mechanical Installation Works – 30%
	Well Field
Works undertaken during July-December 2018	Construction Works – 100%
	Finishing Works – 100%
	Road Installation Works – 100%
	Mechanical-Electrical Installation Works – 100%
	WS Pumping Station
Works undertaken during July-December 2018	Mechanical Installation Works – 80%
	Electrical Installation Works – 30%
	Finishing Works – 80%
	Sewer PS Pumping Station
Works undertaken during July-December 2018	Installation Works – 90%
	Mechanical Installation Works – 80%
	Electrical Installation Works – 80%
	Construction of Reservoir #3
Works undertaken during July-December 2018	Excavation Works – 100%
	Drainage Installation Works – 90%
	Reinforced Concrete Works – 100%

KUT-01

HIGHLIGHTS AND ACHIEVEMENTS DURING REPORTING PERIOD

- 35.** As of 31/12/2018 the overall physical progress is 58.53 % (IPC-34 is pending for the approval of ADB). The average real progress within the last month of 2018 was 4.14 % this. The following works have been implemented during the reporting period:
- 36. Networks DCI:** DCI 500 mm pipe was laid on Dumbadze Street and Baratashvili street (820 m). It is pending a total length of 6.7 km of DCI DN-500 and DN-400 in Network. The DCI 400 pipes were delivered three months ago and the fittings - two months ago, however the contractor didn't start activities yet, because CC don't have enough team and the Municipality does not allow to work in other street till the finishing construction activities at Dumbadze street. This delay could generate a delay in the finishing of the project due to the fact that several regions cannot be connected till the DCI network will be working.
- 37. DCI Transmission Pipe:** The DCI transmission line work has been done very slowly during the last month of 2018 due to several reasons:
- There are several permit issues which are waiting to receive.
 - There are several crossings of, channels, rivers and roads, which are not started yet.
- 38.** The remaining Works of DCI pipe (include DCI Network) are the following:
- DCI pipes in transmission line: length of 2.64 km of DCI DN-500 transmission line out of a total of 11.4 km
 - DCI pipes in network: total length of 6.7 km of DCI DN-500 and DN-400 transmission line
 - Air valve and gate valve chamber: total of 23 chambers
 - River crossing: total of 1 river crossings. The pipe crossing of Tskalsitela River was under construction this month.
 - Channel crossing: total 1 channel crossing. Rioni Channel Bridge design according to the Specification and Drawing No.KUT-01-STR-8,8.
 - Road crossing: total of 2 road crossing. SMK has submitted the Road Permit for Nikea Road. It is pending the Municipality permit.
 - Pressure test: total of 19 km.
- 39. Reservoirs:** This quarter the subcontractor has been working slowly and the improvement is not enough to finish the work on time. The remaining Works on the New East reservoir/Godogani and Mukhnari are the same.
- 40.** The remaining works on the reservoirs:
- New East Reservoir:**
- The second floor of the chlorination chamber and roof.
 - Waterproof testing of the reservoirs.

- All the finishing works inside or the control chamber.
- Electrical and mechanical works.
- Filling and embankment works.
- Access road.

Mukhnari PS and Reservoir:

- All the finishing works inside or the control building and transformer building.
- Panel sandwich cover in PS.
- Electrical and mechanical works of the PS.
- Electrical works of the transformer building.
- Filling and embankment works.
- Access road.

Rioni River Aqueduct:

41. Regarding the Rioni River Aqueduct, the commencement of the aqueduct was scheduled for March 2018, however, Construction Contractor -SMK had informed that due to the high level of water in Rioni River, the commencement of activities would be cancelled till the conditions allow safe access to Rioni River. It was re-scheduled for 15th July 2018 if the water level of Rioni River allowed. Due to the high level of water, the mobilization process was delayed.

Progress of works by the end of December 2018:

- All the Piles were poured concrete and all of them were cut off the head of the pilings.
- 8 columns have been casted.
- 8 Capitals were casted in previous month.
- 1 abutment were casted in previous month.
- 8 decks have been erected during this month.
- 8 handrails decks have been installed this month.
- Construction of the second temporary dam to divert Rioni River.

42. The overall progress of the contractor during July-December 2018 for the project KUT-01 is presented in table 3 below:

Table 3: KUT-01, project progress during the July-December 2018

Site	Pipe Diameter (mm)	Installed
Pipes, Concrete Surface, Superstructure Works undertaken during July December 2018	PE 100-pipes OD 50	99.0%
	PE 100-pipes OD 63	98.0%
	PE 100-pipes OD 75	99.0%
	PE 100-pipes OD 90	99.0%
	PE 100-pipes OD 110	98.0%
	PE 100-pipes OD 125	100.0%
	PE 100-pipes OD 140	100.0%
	PE 100-pipes OD 160	99.0%
	PE 100-pipes OD 180	97.0%
	PE 100-pipes OD 200	96.0%
	PE 100-pipes OD 225	94.0%
	PE 100-pipes OD 250	100.0%
	PE 100-pipes OD 280	80.0%
	PE 100-pipes OD 315	100.0%
	PE 100-pipes OD 355	100.0%
	PE 100-pipes OD 400	100.0%
	Concrete Surface	85%

ABA-01

SCOPE OF WORKS

43. The project area is located in Abasha town. The contract of construction of the new transmission line targets the improvement of the urban water supply system of Abasha.

44. The following major works should be carried out within the ABA-01 project:

- Rehabilitation of the current headwork area including:
 - Guard House
 - Toilet
 - 11 well-heads
 - Power supply to the headwork;
 - Construction of new chlorination building at the headwork;
 - Installation of water meter at the headwork;
 - Construction of service center building in Abasha.

- Construction and rehabilitation of water supply network
 - Transmission lines
 - Network.

Construction works:

- 45.** Up to the end of December 10.229,00 m of 500 mm pipes are laid at the transmission line, 4873.75 m out of 110 mm pipes are laid at the network. 69 house connections are completed till the end of December. 17 fire hydrants are installed. Apartment connections are started up to now 69 connections are done.
- 46.** The overall progress of the contractor during July-December 2018 for the project ABA-01 is presented in table 4 below:

Table 4: ABA-01, project progress during the July-December 2018

Site	Pipe Diameter (mm)	Installed
Works undertaken during July December 2018	PE 100-pipes OD 110	65.26%
	PE 100-pipes OD 63	100.0%
	PE 100-pipes OD 500	67.02%
	PE 100-pipes OD 90	100%

2.4 Description of Any Changes to Project Design

- 47.** According to project requirements, installation of additional eighth Deep Wells have been determined within the URE-01 project at the same location as existing 7 wells along the River Natanebi, approximately 2 km to the north of the village Laituri and installation of Gabion for protection of well fields from flooding and erosion is considering. Natanebi river crossing Aqueduct will be located also 6 km away from the protective wall to connect Laituri reservoir to the pumping station by means of transmission pipe.

48. Based on this above mentioned changes to the project design, IEE for Ureki Water Supply Project was updated in December 2018 and sent to ADB for approval.

2.5 Description of Any Changes to Agreed Construction methods

N/A

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

- 49.** 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 reporting period. Also unscheduled monitoring visits were carried out and non-compliance notes has been issued to the contractor as needed. Mitigation measures in order to reduce major environmental impacts have been instructed to CCs during the monitoring visits as well.
- 50.** The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under KUT-01, URE-01 and ABA-01 sub-projects.
- 51.** Environmental Monitoring Specialist hired under the KUT-01 project Ms. Natia Babukhadia conducted the day-to-day monitoring of the construction sites, filled out the weekly checklists, developed monthly monitoring reports and submitted to SC/Eptisa.
- 52.** During the reporting period, Mr. Tengo Mgaloblishvili, the environmental specialist of the URE-01 sub-project, was replaced by Mr. Mamiya Mikiashvili. A new environmental specialist of contractor was responsible for the daily monitoring of the project sites, development of monthly monitoring reports for submission to SC/Eptisa.
- 53.** Environmental Monitoring Specialist hired under the ABA-01 project by contractor Mr. Nodar Usupishvili conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Eptisa.
- 54.** Environmental Monitoring Specialist of Eptisa, Mr.Irakli Legashvili conducted monthly monitoring of project sites under T3 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.
- 55.** 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 Environmental Monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
- 56.** In accordance with the requirements of IEEs, Contractor is required to undertake parametric measurements and observations on air quality and noise and socio-cultural resources. The monitoring guidelines were set as shown in the Table 5 below for KUT-01, ABA-01 and URE-01 sub-projects.

Table 5: Parametric Measurement Guidelines

Parameters	Frequency & Location	Remarks
KUT-01		
Air Quality	Every 6 months Mukhnari Reservoir, Networks, Transmission Main	Watering site during excavation works to avoid dust spreading Conduct measurements of Dusts Mg/m ³ ; CO Mg/m ³ ; NO ₂ Mg/m ³ ; SO ₂ Mg/m ³
Noise	Every 6 months Mukhnari Reservoir, Networks, Transmission Main	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Impact on Flora and Fauna	Monthly during the site Inspection and audit	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.
URE-01		
Air Quality	Every 6 months Reservoir #1, Pumping Station, Well Fields, Networks, Transmission Main	Watering site during excavation works to avoid dust spreading

Parameters	Frequency & Location	Remarks
		Conduct measurements of Dusts Mg/m ³ ; CO Mg/m ³ ; NO ₂ Mg/m ³ ; SO ₂ Mg/m ³
Noise	Every 6 months Reservoir #1, Pumping Station, Well Fields, Networks, Transmission Main	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Impact on Flora and Fauna	Monthly during the site monitoring.	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.
ABA-01		
Air Quality	Every 6 months Reservoir #1, Pumping Station, Well Fields, Networks, Transmission Main	Watering site during excavation works to avoid dust spreading Conduct measurements of Dusts Mg/m ³ ; CO Mg/m ³ ; NO ₂ Mg/m ³ ; SO ₂ Mg/m ³
Noise	Every 6 months Reservoir #1, Pumping Station, Well Fields, Networks, Transmission Main	Ensure that all equipment & vehicles used for construction activity are in good condition

Parameters	Frequency & Location	Remarks
		Limiting working hours to 8 am – 6 pm
Impact on Flora and Fauna	Monthly during the site monitoring.	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.

3.2 Site Audits

57. Regular inspection and monitoring of construction sites under Kut-01, URE-01 and ABA-01 projects were conducted by ESs of USIIP and Eptisa. The schedule of Joint inspection and summary of audits carried out under KUT-01, Ure-01 ABA-01 projects are provided in the Table 6 below.

Table 6. Summary of site audits

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
Continuous ly during reporting period (July-December 2018)	SMK Kut-01	Environmental Specialists of Contractor Ms. Natia Babukhadia, Environmental Specialist Mr.Mamuka Darakhvelidze, H&S Specilaist under KUT-01 project	Day to day monitoring of sites Compliance with Environmental and HES requirements	1. Health and Safety issues on construction sites in Godogani reservoir 2. Site internally should be arranged properly and cleaned regularly	Weekly Monitoring Checklists (Example in Annex E).
15 August 2018	Kut-01	Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of construction sites	High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents Construction waste should be timely removed from the construction site and disposed properly	Verbal instruction was given to contractor to improve the situation and send improved photos of sites to UWSCG
22-24 August, 2018	Kut-01 Godogani Reservoir	Environmental specialists of USIIP Ms.Ketevan Chomakhidze Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of construction sites	Workers H&S Issues Workers always should use complete PPE	Contractor is given verbal instructions to improve the situation

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
September 4-5, 2018	Kut-01 Godogani Reservoir	Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of construction sites	<p>Proper warning and information signs should be arranged at the entrance and perimeter of the site</p> <p>Concrete washout pit should be managed properly, discharged, fenced and signed. With current condition ground needs urgent remediation</p> <p>Workers always should use complete PPE</p> <p>High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents</p> <p>Construction waste should be timely removed from the construction site and disposed properly</p> <p>Waste should be placed only at the proper waste container</p> <p>All construction materials should be properly segregated and stored adequately</p> <p>Complain box should be properly signed and place at the entrance of the site</p> <p>Safety norms during working at height should be respected</p> <p>Site internally should be arranged properly and cleaned regularly</p> <p>Proper warning and information signs should be arranged at the</p>	Non-Compliance Notice issued 05.09.2018 (Please see Annex C)

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>entrance and perimeter of the site</p> <p>Gate should be properly installed and complete fencing established</p>	
	<p>Kut-01</p> <p>Mukhnari Reservoir</p>			<p>Construction waste should be timely removed from the construction site and disposed properly</p> <p>Trees nearby/at the construction zone should be protected/fenced to avoid its damage</p> <p>All workers should be equipped with complete PPE</p> <p>Safety norms during works at the height should be respected</p> <p>Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination</p> <p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the construction site</p> <p>All construction materials should be properly segregated and stored adequately</p> <p>Ladder safety should be ensured</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
	Kut-01 Network			<p>Safety signs/tapes around of all open trenches should be installed to avoid accident of population</p> <p>Construction activities information signs should be installed at each construction segment</p> <p>During materials transportation tarpaulins cover should be used always</p> <p>Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents</p> <p>Surplus waste soil should be removed and disposed in a proper place</p> <p>Trees nearby/at the construction activities zone should be protected/fenced to avoid its damage</p> <p>Safety signs/tapes around of all open trenches should be installed to avoid accident of population</p> <p>Safety signs/tapes around of all open trenches should be installed to</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>avoid accident of population</p> <p>Construction activities information signs should be installed at each construction segment</p>	
	<p>Kut-01</p> <p>Aqueduct</p> <p>River</p> <p>Crossing</p>			<p>Construction activities information and warning signs should be installed along the construction site</p> <p>High visible safety signs/tapes should be installed around excavation/construction works area and open trenches to avoid accidents</p> <p>Trees nearby construction activities zone should be protect to avoid its damage</p> <p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available</p> <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination</p> <p>Oil spill signs on the ground should be remediated immediately with oils spill kit</p> <p>Construction waste and other waste should be timely removed from the</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>construction site and properly disposed</p> <p>Proper waste containers should be places at the site (with signs, hazardous/non-hazardous waste)</p> <p>Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination</p> <p>Construction activities information and warning signs should be installed along the construction site</p> <p>High visible safety signs/tapes should be installed around excavation/construction works area and open trenches to avoid accidents</p> <p>Trees nearby construction activities zone should be protect to avoid its damage</p> <p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available</p>	
10 October 2018	Kut-01 Godogani Reservoir	Environmental monitoring specialists of SC/EPTISA	Monthly monitoring of sites	High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents	Non-Compliance Notice issued on

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		Mr.Irakli Legashvili		<p>Gate should be properly installed and complete fencing established</p> <p>Construction waste should be timely removed from the construction site and disposed properly</p> <p>Waste should be placed only at the proper waste container</p> <p>Proper warning and information signs should be arranged at the entrance and perimeter of the site</p> <p>High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents</p>	15.10.2018 (Please see Annex C)
	Kut-01 Mukhnari reservoir			<p>Construction waste should be timely removed from the construction site and disposed properly</p> <p>Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination</p> <p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the construction site</p> <p>Trees nearby/at the construction zone should be protected/fenced to avoid its damage</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				All construction materials should be properly segregated and stored adequately	
	Kut-01 Network			<p>Safety signs/tapes around of all open trenches should be installed to avoid accident of population</p> <p>Construction activities information signs should be installed at each construction segment</p> <p>During materials transportation tarpaulins cover should be used always</p> <p>Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents</p> <p>Surplus waste soil should be removed and disposed in a proper place</p>	
	Kut-01 Aqueduct Crossing			<p>Construction activities information and warning signs should be installed along the construction site</p> <p>High visible safety signs/tapes should be installed around excavation/construction works area and open trenches to avoid accidents</p> <p>Trees nearby construction activities zone should be protect to avoid its damage</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available</p> <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination</p> <p>Construction activities information and warning signs should be installed along the construction site</p>	
18-19 October 2018	Kut-01	<p>RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketie Dgebuadze.</p> <p>Environmental specialists of USIIP Ms.Ketevan Chomakhidze</p> <p>Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili</p>	Semi-Annual monitoring of sites	<p>CC to keep records of Accident Record Log (with recorded near misses).</p> <p>CC to prepare location specific EMP for aqueduct construction - 10th of November 2018.</p> <p>CC to install roofing for waste containers at aqueduct. Construction site.</p> <p>CC to install at least one bio toilet for workers at aqueduct Construction site.</p>	<p>Missions of Note issued by RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketie Dgebuadze.</p> <p>All issues are completed.</p>
November 9-10, 2018	Kut-01 Godogani	<p>Environmental specialist of USIIP,</p> <p>Environmental monitoring specialists of</p>	Monthly monitoring of sites	<p>Tree nearby to deep excavation zone should be protect to avoid its falling and damage.</p> <p>Trench side barriers (mesh material) around of</p>	<p>Non-Compliance Notice issued on 08.11.2018</p>

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		SC/EPTISA Mr.Irakli Legashvili		<p>deep excavation should be installed from all sides to avoid accidents.</p> <p>Entrance gate of the construction site should be repaired.</p> <p>Construction waste should be timely removed from the construction site and disposed properly (construction site should be cleaned regularly).</p> <p>Concrete washout pit should be lined with.</p>	(Please see Annex C)
	Kut-01 Mukhnari Reservoir			<p>All workers should be equipped with complete PPE.</p> <p>Ladder safety should be ensured.</p> <p>Safety norms during works at the height should be respected (special equipment during high altitude works should be used).</p>	
	Kut-01 Network			<p>Construction activities information signs should be installed at each construction segment</p>	
				<p>Safety signs/tapes and trench side barriers around of open trenches should be installed to avoid accident of population</p> <p>Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>During materials transportation tarpaulins cover should be used every time</p> <p>Sidewalks should be cleaned from the surplus waste soil and construction materials</p> <p>Surplus waste soil should be removed and disposed in a proper place</p> <p>Dust prevention activities should be carried out</p>	
Continuous ly during reporting period (July-December 2018)	Peri URE-01	Environmental Specialists of Contractor Mr. Mamia Mikiashvili under URE-01 project	Day-today monitoring of sites		Environmental Specialists of CC fill out the checklists and develop monthly monitoring reports
2-3 July, 2018		Environmental specialists of USIIP Ms.Ketevan Chomakhidze Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of sites	<p>Waste should be placed only at the proper waste container</p> <p>All construction materials should be properly segregated and stored adequately</p> <p>Safety norms during working at height should be respected</p>	Verbal instruction is given to contractor to improve minor non-conformances on sites
13-15 August 2018		<p>Environmental specialists of USIIP Ms.Ketevan Chomakhidze</p> <p>Environmental monitoring specialists of</p>	Environmental monitoring and Audit	Construction site has to be properly organized and cleaned on a regular basis	Verbal instruction is given to contractor to improve minor non-conformances on sites

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		SC/EPTISA Mr.Irakli Legashvili			
5-6 September 2018		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili Environmental specialists of USIIP Ms.Ketevan Chomakhidze	Monthly monitoring of sites	<p>Construction site should be properly fenced from all sides and equipped with lockable gate</p> <p>Trees at the construction site should be protect to avoid its damage</p> <p>Construction waste should be timely removed from the construction site and disposed properly</p> <p>Construction territory should be lighted adequately</p> <p>Safety norms during working at height should be provided</p> <p>Equipment & vehicles used for construction activities should be in good condition (no leakage)</p> <p>All construction materials should be properly segregated and stored adequately</p> <p>Special equipment during working at heights should be used</p> <p>Ladder safety should be insured</p> <p>Tarpaulins cover should be used during loose materials transportation</p> <p>Proper fuel/oil spill response items (sand, sawdust, special</p>	Non-Compliance issued, 06.09.2018 (Please see Annex C)

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>containers) should be available at the site</p> <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination</p> <p>Workers always should use complete PPE</p> <p>Site internally should be arranged properly and cleaned regularly</p>	
15 September 2018		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of sites	<p>Safety norms during working at height should be provided</p> <p>Ladder safety should be insured</p> <p>Soil (surplus/accumulated soil) for backfilling purposes should be managed/stored properly</p> <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination</p> <p>All construction materials should be properly segregated and stored adequately</p>	<p>Non-Compliance issued (Please see Annex C)</p> <p>Corrective Action Plan (CAP) was developed by Contractor (Please see Annex E)</p>
15 October		Environmental Specialist of UWSCG/USIIP, Environmental monitoring	Monthly monitoring of sites	Construction territory and wooden materials should be freed from big nails to avoid personnel damage	Completed

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		specialists of SC/EPTISA Mr.Irakli Legashvili		Safety norms during working at height should be provided	
I November 2018		Environmental Specialist of UWSCG/USIIP, Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Monthly monitoring of sites	Proper toilet with relevant sign should be arranged <i>(Completed)</i> Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site <i>(Completed)</i> Construction waste should be timely removed from the construction site and disposed properly	Completed
Continuously during reporting period (July-December 2018)	AS Inshaat–N, LLC (Azerbaijan) ABA-01	Environmental Specialist of Contractor Mr. Usupashvili	Day-to-day monitoring of sites	H&S issues of workers	Fill out checklists Develop monthly monitoring reports and send to SC
20 August 2018		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili		Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage) Safety/warning signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident Top soil should be removed and stored at the proper place before excavation works start	Non-Compliance issued (Please see Annex C)

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>Surplus waste soil should be removed and disposed in a proper place</p> <p>Equipment & vehicles used for construction activities should be in good condition (no leakage)</p> <p>Tarpaulins cover should be used during loose materials transportation</p> <p>Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site</p> <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination</p> <p>Construction waste should be placed in relevant containers and removed timely</p> <p>Proper waste containers with relevant signs should be installed</p> <p>All construction materials should be properly segregated and stored adequately</p> <p>Workers always should use complete PPE</p> <p>All transmission line construction segments should be cleaned/well</p>	

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>organized on regular bases</p> <p>Construction activities information signs should be installed at each construction segment</p> <p>Trees of nearby construction zone should be protected to avoid its damage</p> <p>Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction.</p>	
5 September 2018		<p>Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili</p> <p>Environmental specialists of USIIP Ms.Ketevan Chomakhidze</p>	Monthly monitoring of sites	<p>Safety signs/tapes around of all open trenches should be installed (at the non-operational segments)</p> <p>Surplus/accumulated soil for backfilling purposes should be managed/stored properly</p> <p>Top soil should be removed and stored at the proper place before excavation works start and marked properly</p> <p>Trees of nearby construction zone should be protected to avoid its damage</p> <p>Waste should be placed only at the proper container and discharged timely</p> <p>Construction activities information signs should</p>	Non-Compliance issued (Please see Annex C)

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
				<p>be installed at each construction segment</p> <p>Trench side barriers around of deep open trenches should be installed to avoid accident of population</p> <p>Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage)</p> <p>Workers always should use complete PPE</p> <p>Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction</p> <p>Safety signs/tapes around of all open trenches should be installed (at the non-operational segments)</p> <p>Surplus/accumulated soil for backfilling purposes should be managed/stored properly</p>	
6-7 December 2018		<p>Head, Department of Environmental protection and Permits Ms. Maka Goderdzishvili</p> <p>Environmental monitoring specialists of SC/EPTISA</p>	Monthly monitoring of sites	<p>Safety signs/tapes around of all open trenches should be installed (at the non-operational segments)</p> <p>Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage)</p>	<p>Explanatory Note was issued after site visit by Environmental Specialist of USIIP and Department of Environmental Protection and Permits to IPMO/Departm</p>

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		Mr.Irakli Legashvili Environmental specialists of USIIP Ms.Ketevan Chomakhidze		Trenches should be cut into short sections; tranches should not be left open at night. Safety signs/tapes around of all open trenches should be installed	ent of project management of UWSCG to held meeting with the representative s of Contractor to improve the situation. Results of this additional measures will be provided in the next Semi-annual EMR, January-June 2019.

3.3 Issues Tracking (Based on Non-Conformance Notices)

- 58.** Several Non-Conformances have been observed during the site visits under KUT-01, ABA-01 and URE-01 sub-projects. The contractors were always informed on the detected non-conformances and were demanded to improve on the deadline set and send photos of improvements made together with the corrective action plans. Environmental team of EPTISA and UWSCG/USIIP monitored the improvements during the next monitoring visits. All Non-conformance Notices issued during the reporting period is presented in ANNEX C of this Semi-Annual EMR.
- 59.** A summary of the identified environmental issues for July-December 2018 is presented in table 7 below.

Table 7: Summary of Issues Tracking Activity for Current Period

Summary Table Ure-01	
Total Number of Issues for Project	16
Issues Opened This Reporting Period	0
Issues Closed This Reporting Period	15
Percentage Closed	100%

Summary Table Kut-01 (Godogani Reservoir, Mukhnari Reservoir, Aqueduct, Network)

Total Number of Issues for Project	134
Issues Opened This Reporting Period	11
Issues Closed This Reporting Period	123
Percentage Closed	91%

Summary Table ABA-01 (Water Supply network)

Total Number of Issues for Project	27
Issues Opened This Reporting Period	7
Issues Closed This Reporting Period	20
Percentage Closed	73%

3.4 Trends

- 60.** To identify trends in environmental issues information from previous Semi-Annual EMR (January-June 2019) is used. The summary of the issues is provided in the table 8 below.

Table 8: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
1 January-June 2018	160	87%	13%
2 July-December 2018	177	98%	12%

- 61.** All major Non-Conformances under USIIP/T3 during the reporting period are provided in an Annex C of this report.

3.5 Unanticipated Environmental Impacts or Risks

N/A

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

62. During the reporting period Environmental measurements of Noise level and Ambient air Quality were carried out by contractor under Kut-01 and Ure-01 projects.
63. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 9 and 10 below.

Table 9: Noise Level Guidelines

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

64. Air pollution standards by IFC/WHO 1999, are presented in the Table 10 below

Table 10: Air pollution Guidelines

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

65. Monitoring measurements of noise level and ambient air quality under KUT-01 project was conducted by contractor in December 2018 (See Annex A). Location and data are included in the Table 11 below. The next monitoring measurements will be conducted in March 2019 and results will be reflected in the next January-June EMR 2019.
66. According to data received in December 2018 under KUT-01 project Noise level exceeds the standards required by National Regulations and World Health Organization (IFC/WHO), 1999, and therefore additional measures provided in **Table 13** below is required (Please see table Recommendations to Address Environmental Issues under KUT-01, URE-01 and ABA-01 sub-projects). IFC/WHO standards for Noise and Air pollution are presented in Tables 9 and 10 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 13:00pm to 17:00pm.

Table 11: Monitoring Measurements under KUT-01 Project

Results of Noise and Air quality measurements

Plaice of measurement	Dust Mg/m ³		CO Mg/m ³		No ₂ Mg/m ³		SO ₂ Mg/m ³		Noise db		Radiation mR/h		Vibro-acceleration m/sek	
	standard	result	standard	result	standard	result	standard	result	standard ²	result	standard	result	standard	result
Reservoir 42°14'06.07 ⁱⁱ N 42°42'25.89 ⁱⁱ E	0.5	0.1	5.0	2.1	0.2	0.01	0.5	≥ 0.1	55	47.6	30	9	4.0	2.3
Dumbadze street 42°16'06.65 ⁱⁱ N 42°42'14.84 ⁱⁱ E		0.1		2.2		0.04		≥ 0.1	55	65.3		11		2.0
Lortkipanidze street 42°15'40.76 ⁱⁱ N 42°41'45.2.04 ⁱⁱ E		0.2		2.1		0.02		≥ 0.1	55	70.1		10		0.1
Lomouri Street 42°15'37.85 ⁱⁱ N		0.1		2.6		0.02		≥ 0.1	70	64.4		8		2.1

² Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 9 above.

Plaice of measurement	Dust Mg/m ³		CO Mg/m ³		No ₂ Mg/m ³		SO ₂ Mg/m ³		Nois e db		Radiatio n mR/h		Vibro- accelela tion m/sek	
42°40'23.35 ⁱⁱ E														
Nikea street 42°16'29.11 ⁱⁱ N 42°41'15.76 ⁱⁱ E		0.3		4.1		0.1		≥ 0.1	70	69.0		10		3.4

67. Monitoring measurements under Ure-01 project for noise level and ambient air quality was conducted by the National Environmental Agency under the MEPA in the nearest sensitive receptors to construction sites in December 2018 (See Table 12 below and Annex A). Location and data are included in the table below. The next monitoring measurements will be conducted in March 2019 and results will be reflected in the next January-June EMR 2019.
68. According to data received in December 2018 noise level does not exceed the standards required by National Regulations and World Health Organization (IFC/WHO),1999, and therefore no additional measures are required. IFC/WHO standards for Noise and Air pollution are presented in Tables 9 and 10 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 12:30pm to 16:00pm and no complaints were received from the local population about the noise during the reporting period.

Table 12: Monitoring Measurements under Ure-01 project

N	Place of measurement	Samples #	Results				
			Dust Mg/m ³	CO Mg/m ³	NO2 Mg/m ³	SO2 Mg/m ³	Noise dBA Daytime 07:00 - 22:00
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	55 Residential; Institutional; Educational 70 Industrial; commercial <i>Note: Please see IFC/WHO in table 9 above</i>
1	PS-12 station of Ureki X 0728905 Y 4652381	1	0.012	0.67	0,005	<0,1	50.1
		2	0.011	0.87	0,006	<0,1	51.7
		3	0.009	0.58	0,004	<0,1	52.3
		4	0.008	0.49	0,004	<0,1	51.9
2	PS-15 station of Ureki X 0729097 Y 4612198	1	0.018	0.96	0,005	<0,1	45.4
		2	0.012	0.87	0,005	<0,1	44.3
		3	0.014	1.02	0,005	<0,1	43.8

N	Place of measurement	Samples #	Results				
			Dust Mg/m ³	CO Mg/m ³	NO ₂ Mg/m ³	SO ₂ Mg/m ³	Noise dBA Daytime 07:00 - 22:00
		4	0.009	0.67	0,003	<0,1	42.4
3	Shekvetili Station X 0729334 Y 4646672	1	0.019	0.81	0,004	<0,1	41.3
		2	0.012	0.96	0,003	<0,1	44.5
		3	0.015	1.31	0,008	<0,1	43.7
		4	0.011	0.76	0,006	<0,1	44.9
4	Well of Laituri X 0740579 Y 4646779	1	0.010	0.34	0,002	<0,1	41.5
		2	0.011	0.47	0,002	<0,1	42.0
		3	0.012	0.49	0,003	<0,1	41.5
		4	0.010	0.41	0,004	<0,1	41.8

69. During the reporting period, no measurements were carried out as part of the URE-02 and ABA-01 subprojects, since no construction work was carried out on the URE-02 project, and all construction work as part of the ABA-01 subproject was carried out in remote areas where there is no nearby population.

70. The measurement of noise and air quality the sub-project ABA-01 will be carried out during the next reporting period, when construction works will be carried out in the city center and the results of these measurements will be reflected in the next Semi-annual EMR in January-June 2019.

4.2 Trends

71. All mitigation measures identified within the KUT-01, ABA-01 and URE-01 projects are effective and no additional measures are required.

4.3 Summary of Monitoring Outcomes

72. Noise level during the construction period under KUT-01 sub-project exceed the existing standards of IFC/WHO and therefore additional mitigations are required by contractor. These mitigations are provided in table 13 below. SC and UWSCG/USIIP will monitor the improvements under Kut-01sub-rproject and reflect findings in the next Semi-annual EMR in January-June 2019.

4.4 Material Resources Utilisation

4.4.1 Current Period

- 73.** Despite the request from UWSCG to contractors and the supervision consultant to provide information in accordance with the requirements of the new semi-annual EMR format, the contractor did not provide any information on the cumulative use of water resources, electricity, etc. The UWSCG will hold additional discussions with the contractor to provide the necessary information, and this information will be presented in the next Semi-annual EMR in January-June 2019.

4.4.2 Cumulative Resource Utilisation

N/A

4.5 Waste Management (Kut-01, ABA-01, URE-01)

- 74.** At the construction sites there are mainly produced household, construction (inert, surplus soil) and hazardous waste.
- 75.** Despite numerous requests from UWSCG/USIIP to contractors and SC/Eptisa to provide information on the amount of waste generated during the reporting period, the contractors did not provide any information on this issue. UWSCG will hold additional meetings / trainings with contractors and SC to obtain the requested information in accordance with the new manual developed by ADB. The improvement will be described in the next semi-annual EMR in January-June 2019.
- 76.** Mainly household waste is collected in municipal containers which are served by the local cleaning service. However there are observed some construction sites with littering problem. There is need of routine cleaning of sites. Also it is important to have special container for household waste with proper labelling at the construction site.
- 77.** In most cases waste/surplus soil is removed from the construction site for further use in agreement with municipality or it stays at the construction site for its future use.
- 78.** The construction waste that is allocated at the construction site is removed for its final disposal that is managed by formal agreement with local municipality or Ltd “Solid Waste Management Company”.
- 79.** At some sites there are observed small size bulks of construction waste that should be removed timely based on formal agreement for construction waste final disposal.
- 80.** Hazardous waste (lubricant residues and etc) are stored according to all the safety norms. In the case of formation such kind of waste, contractor has to write to the management of the municipality or the company who is licensed to recycle/decontaminate such kind of waste. Also contractors have special container with proper labelling at the construction site.

4.6 Health and Safety

4.6.1 Community Health and Safety

- 81.** No community incidents have been reported to SC during reporting period under KUT-01, URE-01 and ABA-01 projects.

4.6.2 Worker Safety and Health

KUT-01

- 82.** Environmental H&S Manager of KUT-01 project Mr. Mamuka Darakhvelidze was performing every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/EPTISA and providing relevant reports on a regular basis taking into account any recommendations given by ADB/UWSCG/EPTISA engineers.
- 83.** Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Reinforcement;
 - Protected all trees nearby construction to avoid its damage;
 - Ground works;
 - Manual works;
 - Bending rebar, Cutting;
 - Installation and dismantle formwork
 - Toolbox Talk
 - Dust and Noise Measurements
 - Upgrade Safety Hard and Warning Barricade
- 84.** Contractor under KUT-01 project was working on compilation of statistics information (incidents, near misses, trainings) during reporting period. No workers incidents have been reported during reporting period under KUT-01 project.
- 85.** The following Near Misses were reported under KUT-01 project, which may be resulted in Workers' Health and Safety problems. There were nails on wooden materials which could damage workers during construction activities. In accordance with the instructions given to workers by H&S Specialist wooden materials were cleaned from nails.
- 86.** Another case was the dangerous falling from height during the construction of Godogani reservoir due to the not correctly installing staircase for safety works of personal. Instruction was given to contractor to improve the situation.

- 87.** No workers incidents have been reported during reporting period under ABA-01 and URE-01 projects. No near Misses were reported under URE-01 and ABA-01 projects during the reporting period as well.

4.10 Training

- 88.** Routine personnel trainings and toolbox talks happen by the construction companies almost on daily basis under KUT-01, URE-01 and ABA-01 projects. The recording of such toolbox talks are available at the sites. SC also provides routine instructions and verbal trainings for Construction Company environmental and H&S officers. Statistics of routine toolbox talks will be communicated by the construction companies during next reporting period.

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

- 89.** All SSEMPs under KUT-01, URE-01 and URE-02 projects were prepared by Contractor, endorsed by SC and approved by UWSCG and reviewed/commented by the RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketu Dgebuadze. No Location Specific SEMP was prepared under ABA -01 project as the project includes only rehabilitation of existing water supply network.
- 90.** Location Specific Environmental Management Plan under Ure-01 project was prepared in August 2018 for Reservoir #3 (Laituri reservoir) within the reporting period. The Location Specific EMP was prepared by Contractor, endorsed by SC, reviewed/commented by the RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketu Dgebuadze and reviewed/ approved by UWSCG.
- 91.** The following SSEMPs were prepared by contractor, within the framework of URE-01, URE-02 and KUT-01 projects during the previous reporting periods:

URE-01:

- SSEMPs for Ureki Well Fields (May 2016)
- Reservoir#1 (November 2016)
- Water Supply Pumping Station (November 2016)

URE-02:

- SSEMP for Ureki Waste Water Treatment Plant (November 2015)

KUT-01

- Godogani Reservoir (August 2016)
- Mukhnari Reservoirs (March 2016)
- Aqueduct River Crossing (December 2019)

- 92.** All of the SSEMPs listed above are effective, mitigation measures are still relevant, no changes are required.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

93. N/A

6.2 Opportunities for Improvement

94. N/A

7 SUMMARY AND RECOMMENDATIONS

7.1 Summary

- 95.** During the reported period construction activities were implemented only under KUT-01, URE-01 and ABA-01 sub-projects. Contractors have intensified all activities to improve the progress of the works on sites. Individual and Joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of EPTISA and UWSCG/USIIP on a regular basis.
- 96.** Day-to-day monitoring of the construction sites were carried out by the environmental Specialists of Contractor, weekly checklists were filled out (**Annex D**) and monthly monitoring reports were developed and sent to Supervision Consultant.
- 97.** Environmental Monitoring Specialist of Eptisa, Mr.Irakli Legashvili conducted monthly monitoring of project sites under T3 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.
- 98.** The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under KUT-01, URE-01 and ABA-01 sub-projects.
- 99.** 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.
- 100.** Also unscheduled monitoring visits were carried out and Non-Conformance Notice has been issued to the contractor by the environmental specialist of UWSCG/USIIP if needed. Mitigation measures in order to reduce major environmental impacts have been instructed to CCs during the monitoring visits as well.
- 101.** In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, noise and socio-cultural resources.
- 102.** IEE for Construction of Water Supply and Wastewater Network in Ureki (URE-01) sub-project was updated due to the changes in project design and is awaiting approval from ADB in the next reporting period, January-June 2019.
- 103.** Necessary instructions have been given to the Contractor by UWSCG and SC to follow the EMP's and SEMP's requirements for KUT-01, URE-01 and ABA-01 sub-projects.

7.2 Recommendations

- 104.** During the reporting period, from July to December 2018, the T3 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.

105. More detailed recommendations for the implementation of T3 during the next reporting period January-June 2019 are provided in the table 13 below:

Table 13: Recommendations to Address Environmental Issues under KUT-01, URE-01 and ABA-01 sub-projects

Recommendations KUT-01 and ABA-01 projects	
Recommendations KUT-01	Implementation status and date
Godogani Reservoir	
High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents	Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG by the end of January 2019.
Construction waste should be timely removed from the construction site and disposed properly	
Site internally should be arranged properly and cleaned regularly	
Mukhnari Reservoir	
Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the construction site	Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG by the end of January 2019.
All construction materials should be properly segregated and stored adequately	
Ladder safety should be ensured	
Network	
Safety signs/tapes around of all open trenches should be installed to avoid accident of population	Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG by the mid of January.
Construction activities information signs should be installed at each construction segment	
Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents	
Surplus waste soil should be removed and disposed in a proper place	
Noise from the construction activities should not cause disruption and nuisance to nearby community and other sensitive receptors (i.e. school, hospitals).	Instruction are given to contractor to improve the situation and to conduct following mitigation measures:

Recommendations KUT-01 and ABA-01 projects	
	<p>Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance;</p> <p>Noisy construction activities will be avoided during night time;</p> <p>All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions;</p> <p>Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e. temples, hospitals, schools, houses)</p> <p>Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise.</p> <p>Conduct meetings with population and provide information related to schedule of construction activities and noise caused by the project activities.</p>
Aqueduct Rioni River Crossing	
Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination	The contractor is given strict instructions to improve the situation and remove the old

Recommendations KUT-01 and ABA-01 projects	
	equipment located near the construction site
Safety signs/tapes around of all open trenches should be installed (at the non-operational segments)	Contractor is given strong instruction to improve the situation, develop CAP and send improved photos of site.
Surplus/accumulated soil for backfilling purposes should be managed/stored properly	
Trees of nearby construction zone should be protected to avoid its damage	Instruction are given to contractor to improve the situation and to conduct following mitigation measures:
Workers always should use complete PPE	
Construction activities information signs should be installed at each construction segment	<p>Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance;</p> <p>Noisy construction activities will be avoided during night time;</p> <p>All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions;</p> <p>Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e. temples, hospitals, schools, houses)</p> <p>Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise.</p>
Trench side barriers around of deep open trenches should be installed to avoid accident of population	
Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage)	

Recommendations KUT-01 and ABA-01 projects	

106. Conduct Post-Construction Environmental Audit in March 2019 for URE-02 project and reflect findings of the audit in the next Semi-Annual EMR of January-June 2019.

107. Conduct monitoring of Ambient Noise and Air quality under Ure-01 project at the nearest sensitive receptors in May 2019.

Table 14: The Specific Plan for Environmental Measurement under Ure-01 Project

Parameters	Quarterly measurement
Dust	May 2019
Vibration	May 2019
Carbon monoxide	May 2019
Nitrogen dioxide	May 2019
Sulfur dioxide	May 2019
Noise	May 2019

108. Conduct monitoring of Noise and Ambient Air quality under KUT-01 project near the sensitive receptors of Construction sites in May 2019.

Table 15: The Specific Plan for Environmental Measurement under KUT-01 Project

Parameters	Quarterly measurement
Dust	May 2019
Vibration	May 2019
Carbon monoxide	May 2019
Nitrogen dioxide	May 2019
Sulfur dioxide	May 2019
Noise	May 2019

109. Conduct monitoring of Noise and Ambient Air quality under ABA-01 project at the nearest sensitive receptors of Construction sites in May 2019.

Table 16: The Specific Plan for Environmental Measurement under ABA-01 Project

Parameters	Quarterly measurement
Dust	May 2019
Vibration	May 2019
Carbon monoxide	May 2019
Nitrogen dioxide	May 2019
Sulfur dioxide	May 2019
Noise	May 2019

ANNEX A: Environmental Monitoring Data of Noise and Ambient Air Quality URE-01 Sub-project

Ltd "Feri" 20 December 2018								
Sampling place coordinates	Sample N	Noise DB	Concentration mg/m ³					
			Saturated hydrocarbons	Carbon oxide CO	Nitrogen dioxide NO ₂	Dust	Sulfur dioxide SO ₂	Hydrogen sulfide H ₂ S
PS-12 station of Ureki X 0728905 Y 4652381	1	50.9	<1	0.67	0.005	0.012	<0,1	<0,1
	2	51.7	<1	0.87	0.006	0.011	<0,1	<0,1
	3	52.3	<1	0.58	0.004	0.009	<0,1	<0,1
	4	51.9	<1	0.49	0.004	0.008	<0,1	<0,1
PS-15 Station X0729097 Y4651198	1	45.4	<1	0.96	0.006	0.018	<0,1	<0,1
	2	44.3	<1	0.87	0.005	0.012	<0,1	<0,1
	3	43.8	<1	1.02	0.005	0.014	<0,1	<0,1
	4	42.4	<1	0.67	0.003	0.009	<0,1	<0,1
PS-32 station of Shekvetili საქვებო X0729334 Y4646672	1	41.3	<1	0.81	0.004	0.019	<0,1	<0,1
	2	44.5	<1	0.96	0.003	0.012	<0,1	<0,1
	3	43.7	<1	1.31	0.008	0.015	<0,1	<0,1
	4	44.9	0	0.76	0.006	0.011	<0,1	<0,1
Wells of Laituri X 0740579 Y 4646779	1	41.5	<1	0.34	0.002	0.010	<0,1	<0,1
	2	42.0	<1	0.47	0.002	0.011	<0,1	<0,1
	3	41.5	<1	0.49	0.003	0.012	<0,1	<0,1
	4	41.8	<1	0.42	0.004	0.010	<0,1	<0,1

Executors:
Main specialist
Invited Specialist

Agreed:
Head Environmental Pollution Monitoring Department



S.Khatsava
G. Kargareteli

M. Arabidze

KUT-01 Sub-project



ULUSAL INSAAT ve TICARET A.Ş.

Noise Levels

Distance from noise source, m	Calculation level of the noise Average value - dBa	Calculation level of the noise Maximum value - dBa
10	80	90
20	74	84
40	68	78
80	62	72
160	56	66
320	50	60

Results of Air quality measurements

Plaice of measurement	Dust Mg/m ³		CO Mg/m ³		NO ₂ Mg/m ³		SO ₂ Mg/m ³		Noise db		Radiation mR/h		Vibro- acceleration m/sek	
	standard	result	standard	result	standard	result	standard	result	standard	result	standard	result	standard	result
Reservoir 42°14'06.07" N 42°42'25.89" E	0.5	0.1	5.0	2.1	0.2	0.01	0.5	≥ 0.1	70	47.6	30	9	4.0	2.3
Dumbadze street 42°16'06.65" N 42°42'14.84" E		0.1		2.2		0.04		≥ 0.1		65.3		11		2.0
Lortkipanidze street 42°15'40.76" N 42°41'43.2.04" E		0.2		2.1		0.02		≥ 0.1		70.1		10		0.1
Lomouri Street 42°15'37.85" N 42°40'23.35" E		0.1		2.6		0.02		≥ 0.1		64.4		8		2.1
Nikea street 42°16'29.11" N 42°41'15.76" E		0.3		4.1		0.1		≥ 0.1		69.0		10		3.4

ANNEX B: Project Photos

Construction of the Water Supply Network in Ureki (Ure-01)

Laituri Reservoir #2



URE-01, Pumping Station



URE-01, Network



Kut-01 Concrete washing pit (Godogani reservoir)



Aqueduct River Crossing



Kut-01 Mukhnari reservoir



Aba-01 Construction of Network



ANNEX C: Non-Conformance Notices


















Urban Services Improvement Investment Project - Georgia

Date: 15/08/2018

Page 1 of 2

Non-Compliance Notice

Project: USIIP	Non-compliance Notice UREKI
Contract No: URE-01	
Contractor: PERI	
Reference: UREKI – RESERVOIR IN LAITURI	
This notice is to advice you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently .	
<u>NON-COMPLIANCE IN UREKI</u>	
RESERVOIR IN LAITURI	
<ul style="list-style-type: none">- Construction site should be properly fenced from all sides and equipped with lockable gate- Construction waste should be timely removed from the construction site and disposed properly- Construction territory should be lighted adequately- Proper warning and information signs should be arranged at the entrance and perimeter of the site- Proper toilet with relevant sign should be arranged- Construction territory and wooden materials should be freed from big nails to avoid personnel damage- Safety norms during working at height should be provided- Special equipment during working at heights should be used- Ladder safety should be insured- Soil (surplus/accumulated soil) for backfilling purposes should be managed/stored properly- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination- All construction materials should be properly segregated and stored adequately- Workers always should use complete PPE- Site internally should be arranged properly and cleaned regularly	
<div></div>	

		
		
		
		
All these conditions have to be remedied within six days (by the 22 August 2018) by the prime Contractor (Peri).		
Date of site visits: 14.08-15.08.2018		
Irakli Legashvili EPTISA - Environment		

Non-Compliance Notice

Project: USIIP	Non-compliance Notice KUTAI
Contract No: KUT-01	
Contractor: SMK	
Reference:	
Kutaisi – Godogani Reservoir, Network	
This notice is to advice you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently .	

NON-COMPLIANCE IN KUTAI

Godogani Reservoir

- Construction site should be properly fenced from all sides and equipped with lockable gate (gate needs improvement)
- High visible safety signs/tapes and trench side barriers around of deep open excavation should be installed from all sides to avoid accidents
- Trees at the construction site and nearby deep excavation zone should be protect to avoid its damage
- Construction waste should be timely removed from the construction site and disposed properly
- Construction territory should be lighted adequately
- Safety norms during working at height should be provided
- Special equipment during working at heights should be used
- Ladder safety should be insured
- Proper fencing around concrete washing pit with relevant information/warning sign should be installed (pit should be cleaned regularly)
- Safety officer should permanently visit/monitor construction sites
- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site
- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination
- All construction materials should be properly segregated and stored adequately
- Parking area should be better organized, transport should be parked only at the Parking area
- Workers always should use complete PPE
- Site internally should be arranged properly and cleaned regularly

Photos of Godogani Reservoir





KUTAISI NETWORK

- Construction activities information signs should be installed at each construction segment
- Safety signs/tapes around of all open trenches should be installed to avoid accident of population
- Surplus waste soil should be removed and disposed in a proper place
- Top soil before starting of excavation works should be removed and stored separately
- Trees nearby construction works and excavation zone should be protect to avoid its damage
- Trees cutting without proper agreement/permit is prohibited
- Construction materials should be brought when needed to avoid its long time disposal in the streets and disturbance of residents and businesses
- All transmission line construction segments should be cleaned/well organized on regular bases
- Workers always should use complete PPE
- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction

Photos of Kutaisi Network



All these conditions have to be remedied within five days (by the 27 September2018) by the prime Contractor (SMK).	
Date of site visits 05.09-06.09.2018	
Irakli Legashvili	
EPTISA - Environment	

Non-Compliance Notice

Project: USIIP	Non-compliance Notice KUTAI
Contract No: KUT-01	
Contractor: SMK	
Reference: Kutaisi – Godogani Reservoir, Mukhnari Reservoir, Network, River crossing	

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

NON-COMPLIANCE IN KUTAI

Godogani Reservoir

- High visible safety signs/tapes around of deep excavation should be installed from all sides to avoid accidents
- Gate should be properly installed and complete fencing established
- Construction waste should be timely removed from the construction site and disposed properly
- Waste should be placed only at the proper waste container
- Proper warning and information signs should be arranged at the entrance and perimeter of the site
- All construction materials should be properly segregated and stored adequately
- Complain box should be properly signed and place at the entrance of the site
- Concrete washout pit should be managed properly, discharged, fenced and signed. With current condition ground needs urgent remediation
- Workers always should use complete PPE
- Safety norms during working at height should be respected
- Site internally should be arranged properly and cleaned regularly

Photos of Godogani Reservoir



MUKHNARI RESERVOIR

- Construction waste should be timely removed from the construction site and disposed properly
- Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination
- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the construction site
- Trees nearby/at the construction zone should be protected/fenced to avoid its damage
- All construction materials should be properly segregated and stored adequately
- All workers should be equipped with complete PPE
- Safety norms during works at the height should be respected
- Ladder safety should be ensured
- Site internally should be arranged properly and cleaned regularly

Photos of Mukhnari Reservoir





KUTAISI NETWORK

- Safety signs/tapes around of all open trenches should be installed to avoid accident of population
- Construction activities information signs should be installed at each construction segment
- During materials transportation tarpaulins cover should be used always
- Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents
- Surplus waste soil should be removed and disposed in a proper place
- Trees nearby/at the construction activities zone should be protected/fenced to avoid its damage
- Construction materials should be brought when needed to avoid its long time disposal in the streets and disturbance of residents and businesses
- Trench crossing bridges should be installed at the perimeter of open trenches. Proper access of the house entrances should be ensured
- Workers always should use complete PPE
- All transmission line construction segments should be cleaned/well organized on regular bases
- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction

Photos of Network





Rioni river crossing

- Construction activities information and warning signs should be installed along the construction site
- High visible safety signs/tapes should be installed around excavation/construction works area and open trenches to avoid accidents
- Trees nearby construction activities zone should be protect to avoid its damage
- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available
- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination
- Oil spill signs on the ground should be remediated immediately with oils spill kit
- Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination
- Proper waste containers should be places at the site (with signs, hazardous/non-hazardous waste)
- Construction waste and other waste should be timely removed from the construction site and properly disposed
- Construction materials should be properly segregated, stored adequately (far from the river)
- All surplus construction materials (inert and other) should be removed after work finishes
- Workers always should use complete PPE
- Construction area should be arranged properly and cleaned regularly

Photos of Rioni river crossing





Rioni river crossing

- Construction activities information and warning signs should be installed along the construction site
- High visible safety signs/tapes should be installed around excavation/construction works area and open trenches to avoid accidents
- Trees nearby construction activities zone should be protect to avoid its damage
- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available
- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination
- Oil spill signs on the ground should be remediated immediately with oils spill kit
- Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water contamination
- Proper waste containers should be places at the site (with signs, hazardous/non-hazardous waste)
- Construction waste and other waste should be timely removed from the construction site and properly disposed
- Construction materials should be properly segregated, stored adequately (far from the river)
- All surplus construction materials (inert and other) should be removed after work finishes
- Workers always should use complete PPE
- Construction area should be arranged properly and cleaned regularly

Photos of Rioni river crossing



KUTAIISI NETWORK

- Construction activities information signs should be installed at each construction segment
- Surplus waste soil should be removed and disposed in a proper place
- Construction materials should be brought when needed to avoid its long time disposal in the streets and disturbance of residents and businesses
- All transmission line construction segments should be cleaned/well organized on regular bases
- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction

Photos of Kutaisi Network



KUTAIISI PUMPING STATION

- Proper warning and information signs should be arranged at the construction territory and perimeter of the site
- Safety norms during working at height should be provided
- Special equipment during working at heights should be used
- Trees at the construction site should be protect (trees should be exempt from materials) to avoid its damage
- All construction materials should be properly segregated and stored adequately
- Workers always should use complete PPE
- Site internally should be arranged properly and cleaned regularly


Photos of Kutaisi Pumping station



MUKHNARI RESERVOIR

- All workers (even personnel of subcontractor) should be equipped with complete PPE
- Special equipment during working at heights should be used
- Safety norms during works at the height should be respected
- Ladder safety should be ensured
- All construction materials should be properly segregated and stored adequately

Non-Compliance Notice

Project: USIIP	Non-compliance Notice KUTAISI	
Contract No: KUT-01		
Contractor: SMK		
Reference: Kutaisi – Godogani Reservoir, Mukhnari Reservoir, Network, Rioni river crossing		
This notice is to advise you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently .		
<u>NON-COMPLIANCE IN KUTAISI</u>		
Godogani Reservoir		
<ul style="list-style-type: none">- Tree nearby to deep excavation zone should be protect to avoid its falling and damage- Trench side barriers (mesh material) around of deep excavation should be installed from all sides to avoid accidents- Entrance gate of the construction site should be repaired- Construction waste should be timely removed from the construction site and disposed properly (construction site should be cleaned regularly)- Concrete washout pit should be lined with the geomembrane- Workers always should use complete PPE		
Photos of Godogani Reservoir		
		

Non-Compliance Notice

Project: USIIP	Non-compliance Notice KUTAISI	
Contract No: KUT-01		
Contractor: SMK		
Reference: Kutaisi – Godogani Reservoir, Mukhnari Reservoir, Network, Rioni river crossing		
This notice is to advice you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently .		
<u>NON-COMPLIANCE IN KUTAISI</u>		
Godogani Reservoir		
<ul style="list-style-type: none">- Tree nearby to deep excavation zone should be protect to avoid its falling and damage- Trench side barriers (mesh material) around of deep excavation should be installed from all sides to avoid accidents- Entrance gate of the construction site should be repaired- Construction waste should be timely removed from the construction site and disposed properly (construction site should be cleaned regularly)- Concrete washout pit should be lined with the geomembrane- Workers always should use complete PPE		
Photos of Godogani Reservoir		
		



MUKHNARI RESERVOIR

- All workers should be equipped with complete PPE
- Safety norms during works at the height should be respected (special equipment during high altitude works should be used)
- Ladder safety should be ensured

Photo of Mukhnari Reservoir



KUTAI SI NETWORK

- Construction activities information signs should be installed at each construction segment
- Safety signs/tapes and trench side barriers around of open trenches should be installed to avoid accident of population
- Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents
- During materials transportation tarpaulins cover should be used every time
- Sidewalks should be cleaned from the surplus waste soil and construction materials
- Surplus waste soil should be removed and disposed in a proper place
- Dust prevention activities should be carried out
- During construction works careful operation is needed with high voltage cables to avoid its break and damage of personnel
- Construction materials should be brought when needed to avoid its long time disposal in the streets and disturbance of residents and businesses

- Nearby area of residential houses (entrance) should be cleaned from the construction materials/surplus waste soil
- Regulation of transport/pedestrian movement should be provided. Permanent dedicated personnel should be on site to regulate population movement nearby to construction site
- Workers always should use complete PPE
- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction

Photos of Network





Rioni river crossing

- High visible safety signs/tapes should be installed around excavation/construction works area
- Trees nearby construction activities zone should be protect to avoid their damage
- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination
- Equipment used (power generator) should be in good condition (no leakage) to avoid leakage and ground/water contamination. Urgent mitigation should take place and contaminate ground removed/treated
- Workers always should use complete PPE
- Construction area should be arranged properly and cleaned regularly

Photos of Rioni river crossing





All these conditions have to be remedied within three days (by the 12 November 2018) by the prime Contractor (SMK).

Date of site visits 07.11.2018

Irakli Legashvili
EPTISA - Environment

ABA-01 sub-project

Non-Compliance Notice

Project: USIIP	Non-compliance Notice ABASHA
Contract No: ABA-01	
Contractor: As Inshaan-N	
Reference: ABASHA – Network	

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

NON-COMPLIANCE IN ABASHA

NETWORK




- Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage)
- Safety/warning signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident
- Top soil should be removed and stored at the proper place before excavation works start
- Surplus waste soil should be removed and disposed in a proper place
- Equipment & vehicles used for construction activities should be in good condition (no leakage)
- Tarpaulins cover should be used during loose materials transportation
- Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site
- Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination
- Construction waste should be placed in relevant containers and removed timely
- Proper waste containers with relevant signs should be installed
- All construction materials should be properly segregated and stored adequately
- Workers always should use complete PPE
- All transmission line construction segments should be cleaned/well organized on regular bases
- Construction activities information signs should be installed at each construction segment
- Trees of nearby construction zone should be protected to avoid its damage
- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction

Photos of Abasha Network



		
		
All these conditions have to be remedied within five days (by the 25 August 2018) by the prime Contractor (As Inshaan-N).		
Date of site visits: 15.08.2018		
Irakli Legashvili EPTISA - Environment		

Non-Compliance Notice

Project: USIIP	Non-compliance Notice ABASHA	
Contract No: ABA-01		
Contractor: As Inshaan-N		
Reference: ABASHA – Network		
This notice is to advise you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently .		
NON-COMPLIANCE IN ABASHA		
NETWORK		
<ul style="list-style-type: none">- Safety signs/tapes around of all open trenches should be installed (at the non-operational segments)- Surplus/accumulated soil for backfilling purposes should be managed/stored properly- Top soil should be removed and stored at the proper place before excavation works start and marked properly- Trees of nearby construction zone should be protected to avoid its damage- Waste should be placed only at the proper container and discharged timely- Construction activities information signs should be installed at each construction segment- Trench side barriers around of deep open trenches should be installed to avoid accident of population- Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage)- Workers always should use complete PPE- Refilling/compaction and reinstatement process should bring site at the same or better condition as it was before construction		
Photos of Abasha Network		
		

		
		
		
All these conditions have to be remedied within five days (by the 27 September 2018) by the prime Contractor (As Inshaan-N).		
Date of site visits: 05.09-06.09.2018		
Irakli Legashvili EPTISA - Environment		





All these conditions have to be remedied within four days (by the 19 October 2018) by the prime Contractor (SMK).


Date of site visits 12.10.2018

Irakli Legashvili
EPTISA – Environment
Ketevan Chomakhidze – USIIP UWSCG

ANNEX D: Sample Weekly Monitoring Reports

Mukhrani reservoir

ყოველკვირეული გარემოსდაცვითი მონიტორინგი Weekly Environmental Monitoring		
Name of the Contractor and project number/lot მშენებელი კონტრაქტორის სახელი და პროექტის/ლოტის ნომერი	SMK Ulusal Insaat Ve Ticaret A.S. (Turkey). Construction and Rehabilitation of Water Supply System in Kutaisi / Phase 2 (KUT-01)	
კონტრაქტის №: Contract #:	Contract No: P43405-ICB-KUT-01	
Description and Location of the Site სამშენებლო საიტის ადგილმდებარეობის აღწერა	River Rioni Aqueduct / 32 მ-ის მიწის	
Implementing Agency განმახორციელებელი სააგენტო	შპს „საქართველოს გაერთიანებული წყალმომარაგების კომპანია“ "United Water Supply Company of Georgia", LLC	
Date of Visit (Year/Month/Day) უბრალების დრო და ადგილი	14.09.2018 - 19.09.2018	
Supervisor's Identity (name, last name, contact information and signature) საზედამუდევრო კომპანიის წარმომადგენლის სახელი, გვარი, საკონტაქტო ინფორმაცია და ხელმოწერა	კონტრაქტორი/Contractor: Signature and stamp/ხელმოწერა და ბეჭედი ირაკლი ლეგაშვილი	
Current Stage of Civil Works სამშენებლო სამუშაოების მიმდინარე ტრეტუსი	მიმდინარე. On-going	
Weather Conditions ამინდის პირობები		
ობიექტის უსაფრთხოებასა და გარემოს დაცვაზე პასუხისმგებელი პირი (კონტრაქტორი) Staff responsible for environment/safety at the site (contractor)	სახელი: მამუკა დარახველიძე Name: Mamuka Darakhvelidze	ხელმოწერა/ Signature: 
მშენებლობის ინსპექტორი (ზედამუდევრი) Construction site inspector (supervisor)	სახელი: ნიკოლოზ შიჩიშვილი Name: Nikoloz Shichishvili	ხელმოწერა/ Signature: 

გარემოს დაცვის სპეციალისტი (კონტრაქტორი) Environmental Specialist (contractor)	სახელი: ნათია მამუხაძე Name: Nutsia Babukhadia	ხელმოწერა/ Signature: 
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N	Documents and Facts to be Examined შესამოწმებელი დოკუმენტები და ფაქტები	კი/yes	არა/no	ნაწილად/Partially	არ ვიცი/N.A	შენიშვნა/ Comment
1 EMPs/SSEMPs, Protocols and Reports						
1.1	Contractor's Site-specific Environmental Management Plan (SSEMP) is prepared, reviewed and approved by FIU prior to contractor commencing the works. შემუშავებული და დამტკიცებულია საიტ-სპეციფიკური გარემოსდაცვითი მართვის გეგმა.					Construction of Water Supply System un Kutaisi - phase II
1.2	Construction contractor has National Environmental Specialist in staff. შემუშავებული კონტრაქტორს დადებული აქვს ხელშეკრულება ადგილობრივ გარემოსდაცვითი საკითხების მართვის სპეციალისტთან.	✓				
1.3	Construction contractor has International Environmental Specialist in staff. შემუშავებული კონტრაქტორს დადებული აქვს ხელშეკრულება საერთაშორისო გარემოსდაცვითი საკითხების მართვის სპეციალისტთან.	✓				
1.4	Monthly environmental monitoring reports are prepared by the Contractor and submitted to the Supervision Consultant. მონაცემები გარემოსდაცვითი მართვის გეგმის განხორციელების ყოველთვიური ანგარიშები კონტრაქტორის მიერ და წარედგინება კონსულტანტსათვის.	✓				
1.5	Emergency Response Plan is prepared and approved. შემუშავებული და მიღებულია ავარიულ სიტუაციებზე რეაგირების გეგმა.	✓				
1.6	Health and Safety Management Plan is prepared and approved. შემუშავებული და მიღებულია ჯანდაცვის და უსაფრთხოების მართვის გეგმა და ჯანდაცვის და უსაფრთხოების მართვის სისტემა. მუშაობის უსაფრთხოების გეგმა.	✓				
1.7	Complaints log exists on construction site. ჩივირების ჟურნალი/რეგისტრი არსებობს სამშენებლო საიტზე.	✓				
1.8	Site inspection non-compliance notices issued and corrective action requests implemented.	✓				

1.9	შესახამოშების შესრულების მონაცემები და წარედგინა კონტრაქტორისთვის და მკორექტირებელი ქმედებების განხორციელება. Training/Capacity building activities undertaken as per EMP requirements and records kept of trainings. გაფორმებული და ხელმოწერილია ნუნახელის ტრენინგი სოქო ჯანდაცვის და უსაფრთხოების საკითხებზე. ტრენინგის ანგარიშები მოწოდებულია და ინახება საიტის კვანძზე.	✓				
2 Permits, Licenses and Contracts						
2.1	The Contractor has a permit or relevant contract from the Municipality for final disposal of construction waste/ კონტრაქტორს მიღებული აქვს სამშენებლო ნარჩენების საბოლოო განთავსების ნებართვა ან შესახამისი კონტრაქტი ადგილობრივ ორგანიზაციას.	✓				
2.2	The Contractor has a permit for final disposal of municipal waste. კონტრაქტორს მიღებული აქვს საყოფაცხოვრებო ნარჩენების საბოლოო განთავსების ნებართვა.	✓				
2.3	The Contractor has executed the contract with the licensed organization on the hand over and disposal of hazardous waste. კონტრაქტორს გაფორმებული აქვს საბიფთო ნარჩენების გადაცემისა და გატანის ხელშეკრულება ლიცენზირებულ ორგანიზაციასთან.	✓				
2.4	The Contractor has a license for tree felling/ კონტრაქტორს გააჩნია ლიცენზია ხის ჭრისთვის	✓				
3 Performance of civil works						
3.1	სამშენებლო ტერიტორიის სრულად შემოღობვა Adequate fencing of construction area from all sides	✓				
3.2	საკეტოანი შესასვლელი კარის მოწყობა, სტანდარტული გამაფრთხილებელი და საინფორმაციო ნიშნები აღჭურვა Arrangement of lockable gate with standard warning and information signs	✓				
3.3	სამშენებლო ტერიტორიაზე და პერიმეტრზე სტანდარტული გამაფრთხილებელი და საინფორმაციო ნიშნების განთავსება Placement of standard warning and information signs at the perimeter and inside of construction area	✓				
3.4	ლიდ დამცველ თხრილებზე და ქვებზე უსაფრთხოების ღრუბრებს. პერიმეტრის და გამაფრთხილებელი ნიშნების განთავსება Installation of safety signs/tapes and trench side barriers around of open trenches			✓		
3.5	1.5 მეტრზე მეტი სიღრმის ტრანშეებში კედლების გამაგრება				✓	

	Strengthening of walls of the deep trenches (>1.5m) by boards					
3.6	დასახლებულ ადგილებში დამდე დატვირთულ თხრილებზე დროებითი გადასასვლების მოწყობა Installation of proper temporary wooden/metal walkways/planks across open trenches in settlement areas				✓	
3.7	სამშენებლო ტერიტორიაზე, სამუშაოების ზონაში არსებული ხეების შემორცხვა (დაზიანების თავიდან აცილების მიზნით) Protect all trees nearby construction zone to avoid its damage	✓				
3.8	ტენაკეების დროს, წიაღის ნაკოფიერი (დაახლოებით 20-30 სმ სისქის) ფენის მოხსნა და განცალკევებულად გროვებად შენახვა Removal of top soil (about 30 cm depth) and separately storing in appropriate place				✓	
3.9	სამშენებლო წარმოების და ჭარბი წარმენი გროვების დროული გატანა/გამოცემა Timely removal/disposal of construction waste and surplus waste soil	✓				
3.10	სამშენებლო ტერიტორიის ღამის საათებში განათვა Provide adequate lighting of construction territory				✓	
3.11	სამშენებლო ტერიტორიის შესაბამისად მოწყობა მასალების და მოწყობილობების და დანადგარების ორგანიზებული განთავსება (საჭიროებისას გამოძვინარე) Proper arrangement of construction site and segregation/storing of construction materials/equipment (bring the material when required)	✓				
3.12	სამშენებლო ტერიტორიაზე საწვავის და საპირი მასალების დაღვრის შედეგების სალიკვიდაციო ნაჭრების (ტენა, ნახევრი, მცირე ზომის აწი და სხვა) ხელმისაწვდომობა Availability of proper fuel/oil spill response items (sand, sawdust, special containers) at the construction site	✓				
3.13	საწვავის და საპირი მასალების კონტეინერების განთავსება მხოლოდ საეიკალურ გადამტრულ ადგილებში Allocation of fuel and lubricants containers at the special dedicated place (with roofing and concrete flooring)	✓				
3.14	სამშენებლო ტერიტორიაზე საყოფაცხოვრებო წარმოებისთვის თავსაბრიალი კონტეინერის განთავსება და შესაბამისი წარწერებით აღჭურვა (მაგ. "HOUSEHOLD WASTE") Placement of proper Household Waste container at the special dedicated place with relevant indication signs (for example "Household Waste")	✓				
3.15	სამშენებლო ტერიტორიაზე საბიდაიო წარმოებისთვის თავსაბრიალი კონტეინერის განთავსება და შესაბამისი წარწერებით აღჭურვა (მაგ. "HAZARDOUS WASTE") Placement of proper Hazardous Waste container at the	✓				

	special dedicated places with relevant indication signs (for example "Hazardous Waste")					
3.16	სამშენებლო ტერიტორიაზე ამ მის გარეთ ტრანსპორტაციის პარკების ადგილის მოწყობა და ნიშნით აღჭურვა (მაგ. P) Arrangement of proper Parking area at the adequate place inside/outside of construction territory with relevant sign (for example P)	✓				
3.17	სამშენებლო მასალების და წარმოების ტრანსპორტაციის დროს ავტოტრანსპორტის საეიკალური საფარი (წიფხვსტით, ტენტიფხვსტით) აღჭურვა Use tarpaulins cover during materials transportation	✓				
3.18	საჭიროებისას გამოძვინარე მტერის წარმოების პრევენცია Dust generation prevention activities (when needed)	✓				
3.19	მუშების და ინჟინერ-ტექნიკური პერსონალის მიერ ინდივიდუალური დაცვის საშუალებების (საფხვტი, ჟილეტი, ხელთათმანი, მუხვჩი, დამცავი სათაფლე და სხვა) არულად გამოყენება Ensure that all workers are provided with and use appropriate Personal Protective Equipment - helmets, hand gloves, boots, masks, safety belts	✓				
3.20	პირდალურ მუშაობის დროს საეიკალური დამცავი აღჭურვილობის გამოყენება Use of special safety equipment during working at heights	✓				
3.21	სამშენებლო ტერიტორიის მუდმივად დალაგება და დასუფთავება Regularly cleaning of construction territory	✓				
4 Monitoring Measurements						
4.1	Monitoring measurement data (air, water, soil, acoustics, noise, dust, vibration, etc). წყლის, ჰერის, ვიბრაციის, ეროზიის, ხმაურის, მტერის და წიაღის მონაცემების გაზომვის მონიტორინგი.	✓				
5 Top Soil Protection						
5.1	Topsoil is stripped and stored according to standard procedures and used further for landscaping and reclamation. წიაღის ნიპ-ენ-სტეპი ფენის დაღვა				✓	
6 Safety Measures						
6.1	The workers use all personal safety equipments required for individual technological processes (hard hats, gloves, respirators, glasses, etc). მუშახელი იყენებს ცალკეული ტექნოლოგიური პროცესებისთვის აუცილებელ პირად დამცავ საშუალებებს (საფხვტები, ხელთათმანები, ოქსაირატორები, სათაფლეტი და ა.შ.)	✓				
6.2	The sites are provided with the fire fighting and emergency medical aid kits, site is fenced, site signposts, signs are installed, etc.					

	სამშენებლო ობიექტზე განთავსებულია ხანძარსაწინააღმდეგო და სასაფრთხო სამგდელი დანერგვის სამუშაოები წარმოებს, სიტუაციის მართვა, განაგება დამონტაჟებულია, საინჟინერო დანერგვის/შემოწმების გაგრძელება და სხვ...			✓	
7	Works Completion				
7.1	After completion of main works, the site undergoes final cleanup, harmonization with outward landscape and landscaping. ბოლოვანი სამუშაოების დასრულებისას წარმოებს ობიექტის საბოლოო დასუფთავება, გარე ლანდშაფტთან პარმონიზება და გაშენება.				დასრულებულია
7.2	After completion of the operations in the quarry or its certain section, the idle material is backfilled, compacted, terraced and harmonized with the landscape. კარიერის ან მისი ცალკეული უბნის ექსპლუატაციის დასრულებისას წარმოებს ღრუ მასალის უკუშავება, კომპაქტირება, ტერასირება, და ლანდშაფტთან პარმონიზება.			✓	
7.3	Final Post Construction Environmental Audit/monitoring is conducted and Final Environmental Audit Report is prepared /საბოლოო გარემოს დაცვის მონიტორინგი/აუდიტი ჩატარებულია და საბოლოო გარემოსდაცვის აუდიტის ანგარიში მომზადებულია.				დასრულებულია

ANNEX E: Corrective Action Plan

Ure-01: Improved photos of sites.



PERI Construction Company

Photo 3



Photo 4



PERI Construction Company

Photo 7



Photo 8





PERI Construction Company

Photo 11



Photo 12



PERI Construction Company

Photo 15



Photo 16





Corrective Action Plan

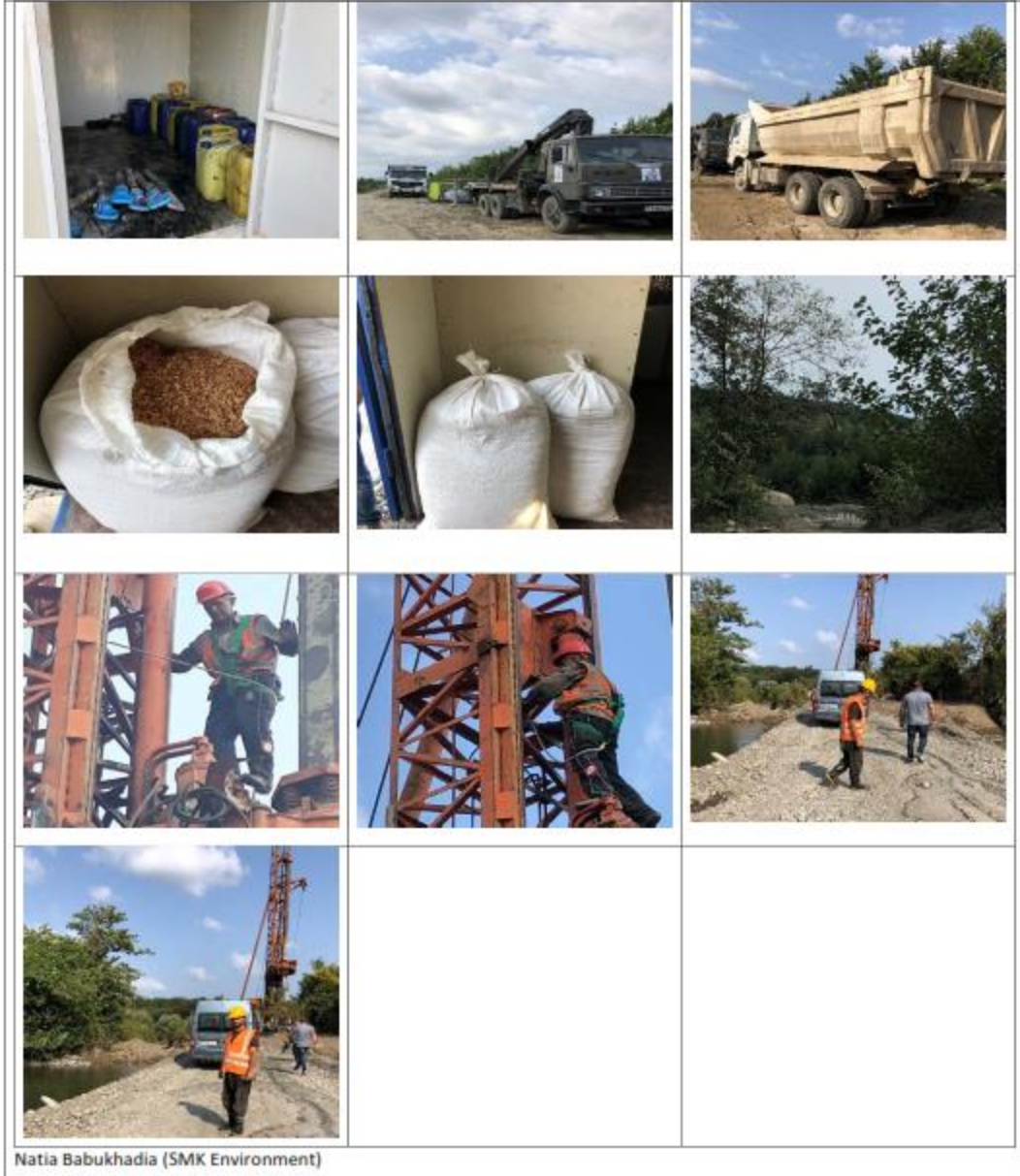
Project Name: <i>Construction of Water Supply in Kutaisi</i>	Corrective Action Plan
Project No: <i>P 43405-ICB-KUT-01</i>	
Project Location: <i>Kutaisi</i>	
Site: <i>Rioni River crossing</i>	
Location: <i>Kutaisi</i>	
Consultant: <i>EPTISA</i>	
Issue: <i>Health, Safety and Environmental Issues</i>	
Date of Site visit: <i>15.08.2018</i>	Notification Date: <i>20.08.2018</i>

Corrective Action PlanRioni river crossing

SMK has already taken action to correct the subject items

- SMK's safety manager took action and information and warning signs are designed and ready for fittment.
- SMK's safety manager took action and high visible safety signs are designed and ready for fittment/according to site specific standards tapes could not be installed around the excavation.
- Containers with fuel/lubricant is managed properly.
- Equipment and vehicles used for construction activities are in good condition.
- SMK took action and all surplus and construction materials are removed and desposed in the proper place on time.
- Proper fuel/oil spill response item sawdust special containers are available at the site.
- SMK took action and trees nearby construction site are protected to avoid its damage.
- SMK took action and all construction materials are properly segregated and stored adequately.
- SMK's safety manager took action and safety norms are provided during working at height.
- All workers are equipped with PPE

Photos of Rioni river crossing



Corrective Action Plan

Project Name: <i>Construction of Water Supply in Kutaisi</i>	Corrective Action Plan
Project No: <i>P 43405-ICB-KUT-01</i>	
Project Location: <i>Kutaisi</i>	
Site: <i>Godogani reservoir</i>	
Location: <i>Kutaisi</i>	
Consultant: <i>EPTİSA</i>	
Issue: <i>Health, Safety and Environmental Issues</i>	
Date of Site visit: <i>06/12/2018</i>	Notification Date: <i>18.12.2018</i>
<p><u>Corrective Action Plan</u></p> <p>Godogani</p> <p>SMK has already taken action to correct the subject items</p> <ul style="list-style-type: none"> - SMK took action and proper site gate is arranged. - SMK took action and construction waste is removed from construction and disposed properly. - Construction territory is lighted adequately. - High visible safety signs/tapes and trench side around of deep open excavation is installed from all sides to avoid accidents. - Proper warning and information signs are installed at the entrance and perimeter of the site. - SMK took action and special equipment is used during working at height. - The ladder safety is insured. - Adequate works are completed and cable removed. - SMK took action and proper fencing around concrete washing pit with relevant information/warning sign is installed. - Site engineer Mr. David fulfils duty of safety officer. - Proper fuel/Oil spill response items(sand,sawdust,special containers)are available at site. - Containers with fuel/lubricant is managed properly. - SMK took action and all construction materials are properly segregated and stored adequately. - Waste is collected regularly at the site and placed only at the proper waste container. - Parking area is arranged with relevant sign and transport is parked only at the parking area. - All workrs are equipped with PPE - Site is cleaned regularly. <p>Photos of Godogani Reservoir</p>	



Natia Babukhadia(SMK Environmental)