

SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

Project Number: 43405-023

Reporting Period: July-December 2018

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM
(TRANCHE 2)
(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

Endorsed by: Maka Goderdzishvili, Head, Department of Environmental Protection and Permits, “United Water Supply Company of Georgia”

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ABBREVIATIONS

ADB	Asian Development Bank
DC	Design Consultant
DEPP	Department of Environmental protection, Resettlement and Construction Permit
DPM	Department of Project Management
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
ES/ SES	Environmental Specialist/ Senior Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IPMO	Investment Program Management Office
USIIP	Urban Services Improvement Investment Program
IA	Implementing Agency
IEE	Initial Environmental Examination
MFF	Multi-tranche Financing Facility
MEPA	Ministry of Environmental Protection and Agriculture
MoRDI	Ministry of Regional Development & Infrastructure
NEA	National Environmental Agency
SC	Supervision Consultant
UWSCG	United Water Supply Company of Georgia
WSS	Water Supply & Sewerage

Table of Contents

1. INTRODUCTION	5
1.1 Preamble	5
1.2 Headline Information	5
2.1 Project Description	5
Post Construction Audit	6
2.2 Project Contracts and Management	7
2.3 Project Activities During Current Reporting Period	12
2.4 Description of Any Changes to Project Design	13
2.5 Description of Any Changes to Agreed Construction methods	13
3. Environmental Safeguard activities	14
3.1 General Description of Environmental Safeguard Activities	14
3.2 Site Audit	15
3.3 Issues Tracking (Based on Non-Conformance Notices)	18
A. Trends	18
3.5 Unanticipated Environmental Impacts or Risks	19
4. Results of environmental monitoring	19
4.1 Overview of Monitoring Conducted during Current Period	19
4.2 Trends	21
4.3 Summary of Monitoring outcomes	21
a. Material resources Utilization	21
4.4.1 Current Period	21
4.4.2 Cumulative Resources Utilization	22
N/A	22
4.5 Waste Management	22
4.5.1 Current Period	22
4.5.2 Cumulative Waste Generation	22
4.6 Health and Safety	22
4.6.1 Community Health and Safety	22
4.6.2 Worker Safety and Health	23
4.7 Training	23
69. functioning of the SEMP	23
5.1 SEMP Review	23
73. good practice and opportunity for improvement	23
6.1 Good Practice	23
6.2 Opportunities for Improvement	23
74. summary and recommendations	24

7.1 Summary	24
7.2 Recommendations.....	24

1. INTRODUCTION

1.1 Preamble

1. This report represents the Semi-Annual Environmental Monitoring Review (SAEMR) for “Urban Services Improvement Investment Program” (USIIP), Tranche 2 and describes the period of July-December 2018.
2. This report is the 10th Semi-Annual EMR for the T2 of “Urban Services Improvement Investment Program”.

1.2 Headline Information

3. IEE for Ureki Water Supply Sub-project (URE-01), which was approved by ADB in June 2013, has been updated in December 2018 and sent to ADB for final approval due to the changes to the project design.

2.1 Project Description

4. 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.
5. 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.
6. Tranche 2 of the Investment Program includes:
 - Construction of Anaklia Water and Sewerage Network (ANA-01);
 - Construction of Mestia Water and Sewerage Network (MES-02),
 - Construction of Anaklia Waste Water Treatment Plant (REG-02),
 - Construction of Water Supply and Wastewater Network in Ureki/Phase II (URE-01).

Status of the projects financed under Tranche 2:

- MES-02, Rehabilitation of Water Supply and Sewerage System in Mestia (completed)
- ANA-01, Construction of Water Supply System and Sewerage Networks in Anaklia (completed)
- REG-02 Anaklia Lot, Construction of Wastewater Treatment Plant in Anaklia

(completed)

- URE-01, Construction of Water Supply and Wastewater Network in Ureki (on-going)

- 7. Anaklia Water and Sewerage Network (Contract ANA-01).** The construction involved the supply and installation of approximately 69 kilometers of water supply and 70 kilometers of sewerage networks and service connections to all residents and hotels defined for the year 2040 for Anaklia and Ganmukhuri villages (total projected population of about 25,600 people). The construction works under Contract ANA-01 started on 16th of January 2012 and was completed in May 2014.
- 8. Mestia Water and Sewerage Networks (Contract MES-02).** The Construction rehabilitation of approximately 30 kilometers of water supply and 46 kilometers of sewerage network will cover the whole town of Mestia including the historic center and the future touristic zones covering all residents and hotels defined for the year 2040 thus benefiting total projected population of about 25,300 people. The construction works under MES-02 project started in October 2011 and was completed in the mid of August, 2015.
- 9. Conduction of Waste Water Treatment Plant in Anaklia (Contract REG-02)** The scope of works includes Construction of Waste Water Treatment Plant in Anaklia (the treated wastewater to be discharged into Enguri River).
- 10.** Contract was signed with JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and Protecno Srl on 22 September 2014 and Notice-to-Proceed given on 08 December 2014. Contract completion date is May 2018.
- 11. Construction of Water Supply and Wastewater Network in Ureki/Phase I (URE-01).** The project is simultaneously financed from Tranches I, II and III and therefore might be some overlap of T1-T3 Semi-Annual EMRs. The main works under Tranche II will comprise laying of sewerage network with the total length of 70 km.
- 12.** 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. Completion date of URE-01 project 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.

Post Construction Audit

- 13.** Mes-02 project Post Construction Environmental Audit was carried out in November 2015. The main findings revealed during the post construction audit are presented in Bi-annual report of July-December 2015.
- 14.** Ana-01 project Post Construction Environmental Audit report was prepared in September 2014. The main findings revealed during the post construction audit are presented in EMR of July-December 2014.
- 15.** Post Construction Environmental Audit under REG-02/Anaklia WWTP sub-project was conducted by the independent consultant in December 2018 (please see Annex D – Post Construction Audit Report).

16. The main conclusions and recommendations contained in the Post-Construction Audit report are as follows: all required mitigation measures such as, site territory fenced fully, topsoil placed at original location; hazardous waste removed and disposed properly; proper lightning system installed are implemented satisfactorily for the site.
17. All partially/not satisfactorily implemented mitigation measures should be corrected until the end of Defects Notification Period by the Contractor (see Table 4 below).

Table 1: Schedule of mitigation measures to be implemented by the contractor

Construction Site	Noncompliance	Corrective Action	Time
WWTP	In the project zone, the trench retained on the territory where the central water drainage system must be connected to the water treatment facility has no relevant label and is dangerous for the employees on the territory.	As it is technically unclear when the existing water drainage system is possible to connect to the water treatment facility (WWTP), following the safety requirements of the employees, the territory must be duly marked or the given territory must be conserved by using safety standards.	4 months
WWTP	Grass planting in the project area with the aim of protecting the territory against erosion did some desirable results. The local grass species planted by the Construction Contractor needs additional care and time to reach best growing progress.	The Construction Contractor planted local grass species in summer. Additional inspection is necessary to identify the fact of correcting the revealed non-compliance.	6 month
WWTP	The containers placed in the project zone are not duly labeled.	The waste containers must be duly labeled as "Domestic waste" and "Hazardous waste".	1 month

18. UWSCG/USIIP, together with the SC/EPTISA will monitor implementation of mitigation measures listed in the Table 1 above, within the proposed time frame and will provide the information about the status of implementation and improvements in the next Semi-Annual EMR, January-June 2019.

2.2 Project Contracts and Management

19. 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.
20. 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

- 21.** 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.
- 22.** UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) – EPTISA. 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.
- 23.** All mitigation measures during construction are implemented respectively by the contractor company: Peri. Contractor has Environmental and H&S 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 EPTISA prepares quarterly environmental reports and submits to UWSCG.
- 24.** 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.
- 25.** 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.
- 26.** 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.

27. 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 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.
28. 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.
29. 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

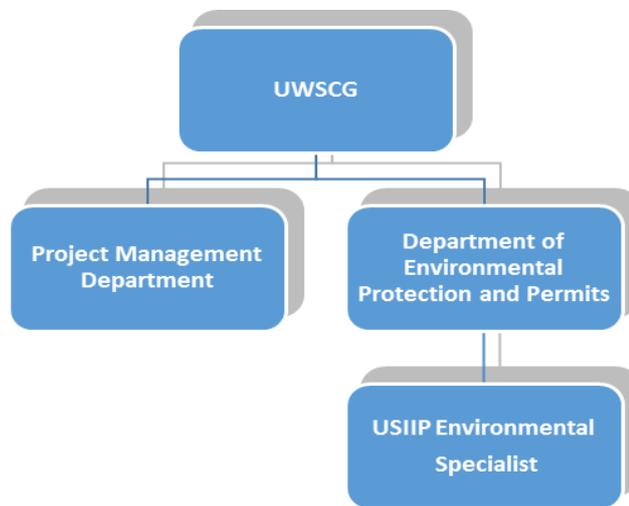
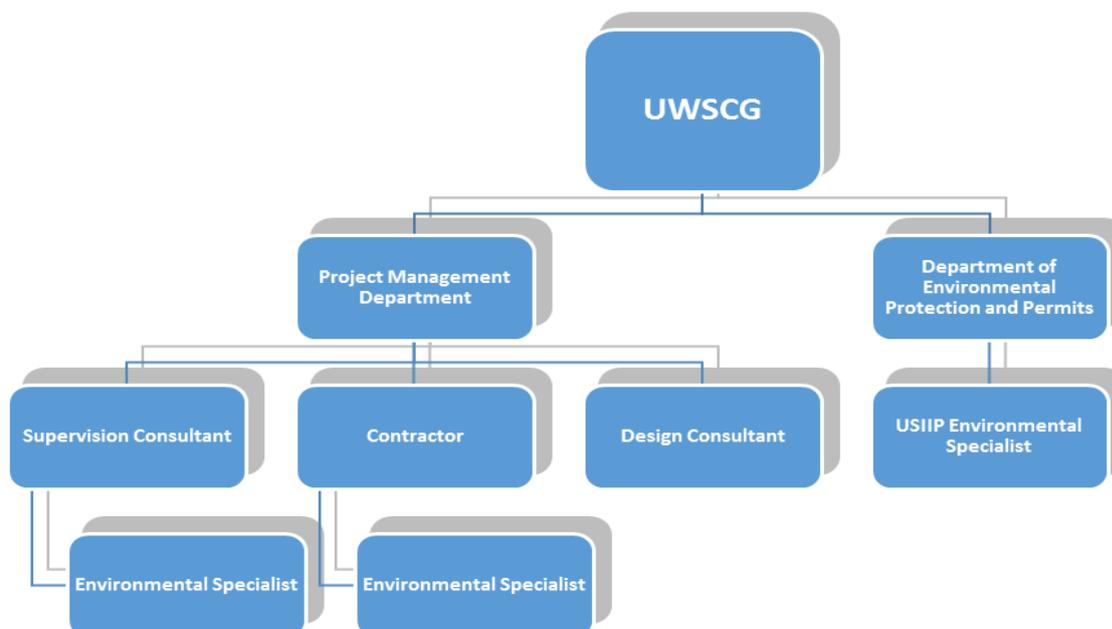


Figure 2: Structure Diagram of the Agencies Involved in Investment Program Implementation



30. Main organizations involved in the project and related to environmental safeguard are presented in the table 2 below:

Table 2: List of Main Organizations under USIIP/T2

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

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
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	UWSCG, Department of Environmental Protection and Permits, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
Borrower	UWSCG	UWSCG/IPMO Department of Projects Management, Head	Mr. Giorgi Archaia Tel: +995 577 380213 E-mail: G.Archaia@water.gov.ge
Borrower	UWSCG/USIIP/T3	Environmental Specialist	Ms. Ketevan Chomakhidze Tel: +995 577 380309 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-01	JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan)	Environmental H&S Specialist	Mr.Mamia Mikiahsvili Tel: +995 551 577 728 Email: mmamia@yandex.ru

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Contractor KUT-01	SMK Ulusal Insaat Ve Ticaret A.S. (Turkey)	Environmental Specialist	Ms. Natia Babukhadia E-mail: natiibab@gmail.com Tel: +995 595 150444
		H&S Specialist	Mr. Mamuka Darakhvelidze E-mail: mamuka.darakhvelidze@gmail.com Tel: +995 592 87 0087

2.3 Project Activities During Current Reporting Period

31. During the reported period construction activities were implemented only under URE-01, therefore only URE-01 is 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.

Water Supply Pumping Station

32. 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:

33. 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:

34. 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.
35. 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:

36. Electrical work has not yet begun, only reinforced concrete work was carried out.
37. The overall progress of the contractor during July-December 2018 for the project URE-01 is presented in table 3 below:

Table 3: URE-01, project progress during the 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%

2.4 Description of Any Changes to Project Design

38. According to project requirements, installation of additional eighth Deep Well has 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.
39. 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

40. 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.
41. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under URE-01 sub-projects.
42. 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.
43. Environmental Monitoring Specialist of EPTISA, Mr.Irakli Legashvili conducted monthly monitoring of project sites under T2 of USIIP 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.
44. Environmental Specialist of USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMPs, and other environmental commitments of the contractor. USIIP/ES developed Semi-annual monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
45. In accordance with the 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 4 below for URE-01 sub-projects.

Table 4: Parametric Measurement Guidelines

Parameters	Frequency & Location	Remarks
Ure-01		
Air Quality	Air Quality Every 3 months UWSCG/Office Construction Site	Watering site during excavation works to avoid dust spreading Conduct measurements of Dusts Mg/m3; CO Mg/m3; NO2 Mg/m3; SO2 Mg/m3
Noise	Noise, Every 3 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
Incorrect surplus/waste soil	Monthly during the site	Utilize surplus/waste soil

Parameters	Frequency & Location	Remarks
management	Inspection and audit	for beneficial purposes such as in construction or to raise the ground-level of low lying sites. Dispose extra waste soil at special disposal place identified by Municipality

46. There are no protected areas, wetlands, mangroves, or estuaries. Trees, vegetation (mostly shrubs and grasses), and animals in the subproject sites are those commonly found in built-up areas. The geological structure of the area is stable and no potential land subsidence is foreseen.

3.2 Site Audit

47. Regular inspection and monitoring of construction sites under URE-01 was conducted by ESs of UWSCG/USIIP and EPTISA. The schedule of Joint inspection and audit under Ure-01 project is provided in the Table 5 below.

Table 5. 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
Continuously during reporting period (July-December 2018)	Peri URE-01	Environmental and H&S 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	Waste should be placed only at the proper waste container All construction materials should be properly segregated and stored adequately Safety norms during working at height should be respected	Verbal instruction is given to contractor to improve minor non-conformances on sites
13-15 August 2018		Environmental specialists of USIIP Ms.Ketevan	Environmental monitoring and Audit	Construction site has to be properly organized and cleaned on a regular basis	Verbal instruction is given to contractor to

Date of visit	Name of Company Name of Contract	Auditors name,	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
		Chomakhidze Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili			improve minor non-conformances on sites
5-6 September 2018		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili Environmental specialists of USIIP Ms.Ketevan Chomakhidze	Monthly monitoring of sites	Construction site should be properly fenced from all sides and equipped with lockable gate Trees at the construction site 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 Equipment & vehicles used for construction activities should be in good condition (no leakage) All construction materials should be properly segregated and stored adequately Special equipment during working at heights should be used Ladder safety should be insured 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	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 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 specialists of SC/EPTISA Mr. Irakli Legashvili	Monthly monitoring of sites	<p>Construction territory and wooden materials should be freed from big nails to avoid personnel damage</p> <p>Safety norms during working at height should be provided</p>	Completed
1 November 2018		Environmental Specialist of UWSCG/USIIP, Environmental monitoring	Monthly monitoring of sites	<p>Proper toilet with relevant sign should be arranged (<i>Completed</i>)</p> <p>Proper fuel/oil spill response items (sand,</p>	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		sawdust, special containers) should be available at the site (Completed) Construction waste should be timely removed from the construction site and disposed properly	

3.3 Issues Tracking (Based on Non-Conformance Notices)

48. Several Non-Conformances have been observed during the site visits under 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.
49. A summary of the identified environmental issues for July-December 2018 is presented in table 6 below.

Table 6: Summary of Issues Tracking Activity for Current Period

Table 5: Summary Table Ure-01

Total Number of Issues for Project	16
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	15
Percentage Closed	98%

A. Trends

50. To identify trends in environmental issues information from previous Semi-Annual EMR (January-June 2018) is used. The summary of the issues is provided in the table 7 below.

Table 7: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
1 January-June 2018	18	87%	13%

2 July-December 2018	16	98%	2%
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51. All major Non-Conformances under USIIP/T2 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

52. 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.

53. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 8 and 9 below.

Table 8: 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

54. Air pollution standards by IFC/WHO 1999, are presented in the Table 9 below

Table 9: Air pollution Guidelines

Contaminants	IFC/WHO Guideline Value (Limit) mg/m ³)
1	2
Inorganic dust	(*IFC does not have a standard for "inorganic dust". Instead IFC applies standards for PM2.5 and PM10). PM10 – 0,02/1 Year 0,05/24 Hour PM2,5-0,01/1 Year 0,025/24 Hour
Carbonic monoxide	n/a

Nitrogen dioxide (NO ₂)	0,2/ 1 Hour 0,04/1 Year
Aldehyde	n/a

55. Monitoring measurements of noise level and ambient air quality under Ure-01 project was conducted by the National Environmental Agency under the MEPA in the nearest sensitive receptors to construction sites in December 2018 (See Table 11 and Annex A). Location and data are included in the table below. The next monitoring measurements will be conducted in May 2019 and results will be reflected in the next January-June EMR 2019.

56. 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 7 and 8 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 13:00pm to 16:00pm and no complaints were received from the local population about the noise during the reporting period.

Table 10: Monitoring Measurements under Ure-01 project

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
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	55 Residential; Institutional; Educational 70 Industrial; commercial
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
		4	0.009	0.67	0,003	<0,1	42.4

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
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

4.2 Trends

57. Noise level and Ambient Air Quality in the framework of the URE-01 project meet national and international standards, and no further deterioration is expected.

4.3 Summary of Monitoring outcomes

58. According to data received during the reporting period noise level and ambient air quality do not exceed the standards required by National Regulations and World Health Organization (IFC/WHO), 1999, therefore no additional monitoring is needed.

a. Material resources Utilization

4.4.1 Current Period

59. 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 Resources Utilization

N/A

4.5 Waste Management

4.5.1 Current Period

60. At the construction sites there are mainly produced household, construction (inert, surplus soil) and hazardous waste.
61. 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.
62. 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.
63. 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".

4.5.2 Cumulative Waste Generation

64. 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.

4.6 Health and Safety

4.6.1 Community Health and Safety

65. URE-01 HSE Manager Mr. Mamia Mikiashvili is performing every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/EPTISA.
66. Health & safety and environment issues which were covered during the reporting period are as follows:
 - PPE;
 - Ground works;
 - Manual works;
 - Removal waste;
 - Induction all visitors
 - Toolbox Talk
 - Upgrade Safety Hard and Warning Barricade

67. No community incidents have been reported to SC during reporting period

4.6.2 Worker Safety and Health

68. No workers incidents have been reported to SC during reporting period. Contractor companies are currently working on compilation of statistics information (incidents, near misses, trainings) during reporting period that will be communicated to SC for the next reporting period.

4.7 Training

69. Routine personnel trainings and toolbox talks happen by the construction companies almost on daily basis. The recording of such toolbox talks are available at the sites. SC also provides routine instructions and verbal trainings for construction company environmental officers. Statistics of routine toolbox talks will be communicated by the construction companies during next reporting period.

70. FUNCTIONING OF THE SEMP

5.1 SEMP Review

71. Location Specific Environmental Management Plan under Ure-01 project was prepared for Reservoir #3 (Laituri reservoir) within the reporting period. The Location Specific EMP for Laituri Reservoir was prepared by Contractor, endorsed by SC, reviewed/commented by the RETA International-Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketu Dgebuadze and reviewed/ approved by UWSCG in August 2018.

72. The following SSEMPs were prepared by contractor, within the framework of Ure-01, project during the previous reporting periods:

URE-01:

- SSEMPs for Ureki Well Fields;
- Reservoir#1;
- Water Supply Pumping Station;

73. All these SSEMPs were prepared endorsed by SC and approved by UWSCG after the review/comment by the RETA Regional Environmental Consultant, Ms. Ketu Dgebuadze.

74. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

N/A

6.2 Opportunities for Improvement

N/A

75. SUMMARY AND RECOMMENDATIONS

7.1 Summary

76. During the reporting period, construction work was carried out only as part of the URE-01 project. Construction work within the framework of the MES-01, MES-02 and REG-02 /Anaklia WWTP projects has already been completed. Post-construction environmental audit reports for MES-01, MES-02 were prepared by Independent Consultants and approved by ADB. Post-construction environmental audit under the REG-02/ Anaklia project has already been completed, and the corresponding report will be presented during the next reporting period, and the results of the above-mentioned report will be reflected in the next Semi-Annual EMR of January-June 2019.
77. Day-to-day monitoring of the construction sites were carried out by the environmental Specialists of Contractor, weekly checklists were filled out and monthly monitoring reports were developed and sent to Supervision Consultant.
78. Environmental Monitoring Specialist of EPTISA, Mr. Irakli Legashvili conducted monthly monitoring of project sites under T2 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.
79. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under URE-01 sub-project.
80. Environmental Specialist of USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMP, and other environmental commitments of the contractor. USIIP/ES developed Semi-Annual EMRs and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
81. 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.
82. 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 and noise.

7.2 Recommendations

83. During the reporting period, from July to December 2018, the T2 of Investment Program was implemented in accordance with ADB SPS 2009 and the requirements of National Legislation.
84. More detailed recommendations for the implementation of T2 during the next reporting period January-June 2019 are provided in the table 11 below:

Table 11: Recommendations to Address Environmental Issues under Ure-01 project

Recommendations Ure-01 project

Recommendations Ure-01 project	
Ure-01	
Construction waste should be timely removed from the construction site and disposed properly	Contractor is given strong instruction to improve the situation, and send improved photos of sites.
Construction territory should be lighted adequately	
Proper warning and information signs should be arranged at the entrance and perimeter of the site	
Construction waste should be timely removed from the construction site and disposed properly	
Safety norms during working at height should be provided	
Ladder safety should be insured	
Soil (surplus/accumulated soil) for backfilling purposes should be managed/stored properly	
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	

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

Table 12: 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

ANNEX A: MEASUREMENT DATA

Ltd "Feri" 20 December 2018

Samplin 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 საღებურის 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

S.Khatsava
G. Kargareteli

M. Arabidze

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

Sewerage Network



Reservoir #1



Laituri Reservoir #2





Water Supply Pumping Station



ANNEX C: NON-COMPLIANCE NOTICES

URE-01

Non-Compliance Notice

Project: USIIP	Non-compliance Notice UREKI
Contract No: URE-01	
Contractor: PERI	
Reference: UREKI – RESERVOIR IN LAITURI	

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 UREKI

RESERVOIR IN LAITURI

- 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





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

ANNEX D:

Post Construction Environmental Audit Report

**GEORGIA: L2807: URBAN SERVICES IMPROVEMENT
INVESTMENT PROGRAM (TRANCHE 2)**

**Construction of Waste Water Treatment Plant in Anaklia
(REG-02)**

December, 2018

ABBREVIATIONS

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

TABLE OF CONTENTS

1.	I. INTRODUCTION	4
2.	II. PROJECT DESCRIPTION	4
2.1	Brief subproject description	4
2.2	Agencies Involved in REG-02 subproject implementation under USIIP, Tranche 2	6
3.	III. SUMMARY OF PREVIOUS AUDITS AND ISSUES STILL OPEN FROM EMR	8
3.1	Environmental Management Plans, Conducted Environmental Audits	8
4.	IV. SUMMARY OF OBSERVATIONS OF SITE VISITS	10
5.	V. CONCLUSIONS AND RECOMMENDATIONS	15
6.	ANNEXES	16
	Annex 1: Anaklia WWTP post-construction environmental audit checklist	16

I. INTRODUCTION

1. This report represents the Post Construction Environmental Audit Report for REG-02: Construction of Waste Water Treatment Plant in Anaklia Subproject under L 2807: Urban Services Improvement Investment Program" (USIIP), Tranche 2 and describes the period of July-December 2017.

2. This Post Construction Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including safeguards requirement and aims to identify past and present concerns from the production and business activities of Project Company that related to impacts on environment. The specific objectives of the audit can be summarized as follows:

- Determine and verify whether all environmental requirements, criteria and constraints, prescribed in IEE, SSEMP and the Concessionaire's Environmental Policy have been adhered to during the construction phase.
- Determine and verify whether the mitigation actions and rehabilitation requirements contained in the SSEMP have been appropriate and successful to prevent or control environmental pollution and/or damage.
- Ensure that an appropriate environmental monitoring and control program exists to follow up on mitigation and rehabilitation works completed during the construction phase.
- Ensure that appropriate environmental monitoring and control program exists for monitoring of all environmental aspects during the operational phase.
- To identify any shortcomings in the SSEMP and EMS system implemented during the construction phase and to recommend alterations to the EMS applicable to the operational phase.

II. PROJECT DESCRIPTION

2.1 Brief subproject description

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

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

5. Tranche 2 of the Investment Program includes the following sub-projects:

- Construction of Anaklia Water and Sewerage Network (ANA-01);
- Construction of Mestia Water and Sewerage Network (MES-02),
- Construction of Anaklia Waste Water Treatment Plant (REG-02),
- Construction of Water Supply and Wastewater Network in Ureki/Phase II (URE-01).

6. The presented final audit report covers only Construction of Anaklia Waste Water Treatment Plant (REG-02) subproject.

7. The scope of works of the subproject includes the construction of a Wastewater Treatment Plant (the treated wastewater to be discharged into Enguri River) and main sewage collector in Anaklia. In addition to the WWTP, the Contractor designed and built the pressure lines leading from the collector network to the WWTP and from the WWTP to the outlet into the river. The design of WWTP is to cater for the full flow and pollution loads for the 2040 population equivalent of 25,611PE but the first stage of construction is to provide all treatment processes for only half of the flow and loads calculated for 2040. The contract with JV "Pfeiffer-Protecno" for construction of Anaklia WWTP was signed on September 22, 2014. The initial completion date was scheduled on December 6, 2016. The contractor was unable to complete the work within the project period and was imposed by penalties in accordance with the terms and conditions of the Reg-02 contract. The updated project completion date is May 2018.

8. The Waste Water Treatment Plant is constructed on a government owned site, comprising 2.5 – 3 ha of land. Location of the site is shown in **Map 1**. It is located more than 100 m south of the town close to the Black Sea. Site is accessible by a field access road.

Map 1: Location of the WWTP with access road



2.2 Agencies Involved in REG-02 subproject implementation under USIIP, Tranche 2

9. 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.

10. 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. In December 2016 the name of Investment Program Management Office (IPMO) - Strategic Planning and Donors Relation Department (DSPDR) changed and became an International Procurement and Donors Relations Department. A new Department of Environmental Protection, Resettlement and Construction Permit (DEPRP) was established under UWSCG as well. DEPRP replaced the existing Unit of Resettlement and Environmental Protection (UREP). DEPRP will include Unit of Construction Permission and will consist of five staff members. The new structural changes enter into force from January 2017.

11. UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) - Eptisa. 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.

12. All mitigation measures during construction have to be implemented by the contractor and these are monitored by the supervision consultant (SC). To ensure the smooth implementation of EMPs and SEMP of subprojects, an Environmental Management Specialist (EMS) is employed by the SC/Eptisa. SC/EMS conducts routine observations and surveys, prepares quarterly environmental reports and submits these to UWSCG.

13. The Contractor has the following obligations:

- to prepare SSEMPs;
- to employ Environmental Consultant responsible for developing and implementing the construction phase SSEMPs and for providing the corresponding information to UWSCG and SC;
- to develop Solid Waste Disposal Plan and agreed the MoENRP and Local Government

14. DC is responsible for developing and incorporation of mitigation measures in design and construction.

15. The environmental specialist (ES) is hired by UWSCG under the USIIP to assist and advise the DEPRP in USIIP program implementation 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 DEPRP in EARF implementation, in particular, reviewing IEE/EIA Reports and overseeing implementation of EMP/SSEMPs and in training and capacity-building activities. The ES prepares bi-annual and annual environmental monitoring reports and submits to ADB.

16. DEPRP is responsible for the implementation of mitigation and monitoring measures during construction and operation of subprojects under USIIP. Currently DEPRP is staffed with a Head of Department, Head of Construction Permission Unit and 3 specialists, those are responsible for resettlement, environmental protection and construction permission issues.

17. A list of main organizations and persons involved in the implementation of REG-02 subproject under USIIP/T2 and relating to environmental safeguards is presented in **Table 1** below.

Table 1: Agencies involved in REG-02 subproject implementation

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
		Georgian Resident Mission	Nino Nadashvili nadashvili@adb.org
		ADB RETA International-Regional Environmental Consultant	Keti Dgebuadze +995 577232937 ketdgeb@yahoo.com
Borrower	UWSCG	Head of Environmental and Resettlement Department;	Maka Goderdzishvili M.goderdzishvili@water.gov.ge
		Environmental Consultant for ADB Projects	Ketevan Chomakhidze chomakhidzek@yahoo.com Tel:+995 577 380309
Supervision Consultant	Ltd. Eptisa	Environmental Expert	Irakli Legashvili Chem_ira@yahoo.com Tel:+995 577 177016
Sub-contractors	JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG (Germany) and ProtechnoSrl (Italy)	Environmental Specialist	Nikoloz Meparidze Tel: +995 599 346821 E-mail: niko@telenet.ge

III. SUMMARY OF PREVIOUS AUDITS AND ISSUES STILL OPEN FROM EMR

3.1 Environmental Management Plans, Conducted Environmental Audits

18. All environmental management plans (e.g. Waste Management Plan, Health and Safety Plan, SSEMP, etc) requested under the IEE have been prepared by the Contractor JV "Pfeiffer-Protectno" and approved by the PIU-UWSCG. SSEMP was prepared by the contractor before commencement of construction activities on 24 June 2015 which was endorsed by Supervision Company – Eptisa and approved by UWSCG/PIU. According to Georgian legislation Contractor prepared Waste Management Plan which was submitted to the Ministry of Environmental Protection for approval in January 2017.

19. Contractor JV "Pfeiffer-Protectno" has also developed the Reinstatement Action Plan for reinstatement of WWTP territory which was submitted and agreed with MoENRP on 26th May of 2017. Based on this plan Contractor JV "Pfeiffer-Protectno" implemented reinstatement activities of the WWTP territory.

20. Environmental Measurements were carried out by the contractor at Anaklia WWTP construction site as well as near the settled area. The last environmental measurements were conducted during January-June 2017 reporting period.

21. Environmental team involved in the project implementation process has performed permanent environmental monitoring and audits in the project zone. During January-June 2017 reporting period 8 site inspections and audits have been carried out. Detailed information related to the schedule and involved organizations during the January-June 2017 is given in the **Table 2** below.

Table 2: The Schedule of Conducted Audits and Monitoring during the Reporting Period

#	Ure-01 project	Organization	Date
1	Day-to-Day Site Inspection	Environmental Specialists of Contractors under Ure-01 and Reg-02 projects	1 July – 30 December 2017
2	Site Monitoring and Inspection	Environmental specialist of USIIP and Environmental specialist of Eptisa	11 July 2017
3	Site Monitoring	Environmental specialist of Eptisa	27-28 July 2017
4	Site Monitoring	Environmental specialist of Eptisa	9-10 August 2017
5	Site Monitoring	Environmental specialist of Eptisa	22 September 2017
6	Site Audit	Environmental specialist of USIIP environmental specialists of Eptisa and International-Regional	28-30 September 2017

#	Ure-01 project	Organization	Date
		Environmental Safeguards Consultant Ms. Ketidgebudze	
7	Site Audit	Environmental specialist of USIIP environmental specialists of Eptisa, International-Regional Environmental Safeguards Consultant Ms. Ketidgebudze and Duncan Lang, Environmental Specialist, ADB	1-2 October 2017
8	Site Monitoring	Environmental specialist of Eptisa	8-10 November 2017

22. During the above-mentioned inspections and audits 14 non-compliances have been revealed out of which 13 non-compliances were corrected till 30th of June 2017. The list of main non-compliances and status of implementation of corrective actions are given in the **Table 3** below.

Table 3: Lis of non-compliances revealed during Jan-Jun 2017

Construction Site	Environmental Issues	Action taken
Anaklia WWTP	- Site toilet should be in order and operated as a matter of urgency	Completed
	- Safety signs/tapes and trench side barriers around all trench should be installed	Completed
	- Transport should be parked only at the parking area	Completed
	- All construction materials should be properly segregated and stored adequately	Completed
	- "Hazardous Waste" container should be properly labeled	Completed
	- Construction waste materials should be removed from the site timely and permanently	Completed
	- All containers of fuel and lubricants should be placed in a better organized place and managed properly	Completed
	- Soil for backfilling purposes should be stored properly	Completed
	- Tarpaulins cover during materials transportation should always be used	Not Completed
	- PPE equipment should be used always and completely by all workers	Completed
- Site internally should be arranged	Completed	

Construction Site	Environmental Issues	Action taken
	properly and cleaned regularly	
	- Dust prevention measures should be actively implemented having a dry season (permanent watering needed)	Completed
	- Transport should be parked only at the parking area	Completed
	- All containers of fuel and lubricants should be placed in a better organized place with roofing and managed properly	Completed

23. Besides, 3 non-compliances were revealed by the ADB CSR Mission conducted on 19-21 April 2017. The mentioned non-compliances were corrected till 30th of June 2017.

IV. SUMMARY OF OBSERVATIONS OF SITE VISITS

24. Within the scope of Anaklia Wastewater Treatment Plant Construction Subproject final post-construction environmental audit was conducted on 3rd of August 2018. The final audit was performed for Anaklia WWTP construction site.

25. Within the scope of the Subproject final environmental audit was conducted on 3rd of August 2018 and post-construction environmental checklist filled (see attached checklist in **Annex 1**).

26. The construction works were fully accomplished satisfactorily, all kinds of waste, including construction waste were removed from the site, and territory of the WWTP construction site was fully fenced and kept clean (**Figures 1 and 2**).



27. Lightning system around the whole perimeter of the WWTP site is installed and works properly (**Figure 3**).

Figure 3: WWTP area with lightning system



28. During the final audit, few non-compliances were revealed at the construction site which are listed below:

29. #1 Non-Compliance re the connection point of the drainage system with WWTP

Observation:

30. Despite the fact that the construction is over, the WWTP is not connected up to the central sewage network. As the representatives of the Construction Company have explained, the capacity of the installed equipment is much more than that of the existing network. The network capacity was calculated based on Anaklia Development Plan available at the stage of the Project development. As per the said Plan, by the time the construction and commissioning of WWTP were planned to complete, a number of hotels in Anaklia resort zone had to be complete and commissioned as well. However, due to both, subjective and objective reasons, the hotels could not be completed. Consequently, the sewage network could not be loaded with the planned capacity and connection of the existing WWTP to the network is impossible following the requirements of the technical parameters. When it is possible to connect the said network to WWTP, is not clear today. The area where the water drainage network must be connected to WWTP in the future is remained open (**Figures 4 and 5**). As the figures show, the connecting spot is left open, the water is accumulated in the area and the territory is covered with plants gradually.

Finding:

31. The trench left in the area where the central water drainage system must be connected to the water treatment works in the project zone is not duly labeled and is hazardous for the employees working on the given territory.



Corrective action:

32. Due to the fact that it is not clear when it will be technically possible to connect the water drainage system to the water treatment facility (WWTP), following the safety requirements of the employees, the area must be duly labeled or the safety standards of the given area must be conserved by using the due requirements.

33. #2 Non-Compliance re the incompletely reinstated areas in the project zone

Observation:

34. The topsoil removed during the construction phase is returned totally and placed in the project zone. After the topsoil placement, as it was envisaged by SSEMP developed within the scope of the Project, Construction Company JV "Pfeiffer-Protectno" with the aim to protect the small slopes against erosion, had to plant the relevant grass species. It is true that the grass was planted in the given area, but as it was fixed at the stage of audit, there is need of additional care and time to reach best growing progress (**Figures 6 and 7**).





Finding:

35. Grass planting in the project area with the aim of protecting the territory against erosion did some desirable results. The local grass species planted by the Construction Contractor needs additional care and time to reach best growing progress.

Corrective action:

36. Corrective action has been done, the Construction Company planted the local grass species in summer period (2018). Additional inspection is necessary to identify the fact of correcting the revealed non-compliance.

37. #3 Non-compliance re the labeling of the waste containers

Observation:

38. At the stage of the audit, the project zone was totally cleared off the waste. There were both, metal and plastic containers in the area. However, none of them were duly labeled (**Figures 8 and 9**).

Figure 8: Containers in the project zone	Figure 9: Containers in the project zone
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Finding:

39. The containers found in the project zone are not duly labeled.

Corrective action:

40. It is necessary to make relevant marking on the waste containers, such as "Domestic waste" and "Hazardous waste".

VI. CONCLUSIONS AND RECOMMENDATIONS

41. Required mitigation measures such as: **Site territory fenced fully, topsoil placed at original location; hazardous waste removed and disposed properly; proper lightning system installed** are implemented satisfactorily for the site.

42. **All partially/not satisfactorily implemented mitigation measures should be corrected until the end of Defects Notification Period by the Contractor** (see Table 4 below).

Table 4: Schedule of mitigation measures to be implemented by the contractor

Construction Site	Noncompliance	Corrective Action	Time
WWTP	In the project zone, the trench retained on the territory where the central water drainage system must be connected to the water treatment facility has no relevant label and is dangerous for the employees on the territory.	As it is technically unclear when the existing water drainage system is possible to connect to the water treatment facility (WWTP), following the safety requirements of the employees, the territory must be duly marked or the given territory must be conserved by using safety standards.	4 months
WWTP	Grass planting in the project	The Construction Contractor	6 month

	area with the aim of protecting the territory against erosion did some desirable results. The local grass species planted by the Construction Contractor needs additional care and time to reach best growing progress.	planted local grass species in summer. Additional inspection is necessary to identify the fact of correcting the revealed non-compliance.	
WWTP	The containers placed in the project zone are not duly labeled.	The waste containers must be duly labeled as "Domestic waste" and "Hazardous waste".	1 month

ANNEXES

Annex 1: Anaklia WWTP Post-Construction Environmental Audit Checklist

Required mitigation measures of environmental impact	Measures implemented				Comment
	yes	partially	no	N/A	
Site territory fenced fully	x				The site is completely fenced and protected.
Topsoil placed at original location	x				The topsoil is returned to its original location, where it was removed earlier in line with the legislative requirements.
Vegetation cover reinstated			x		The reinstatement works were accomplished; however, additional inspection is required
Trees replanted as needed				x	No trees were cut down on the reservoir site under the project.
Construction waste and surplus/waste soil removed completely and disposed properly	x				The construction waste is totally removed from the reservoir site.
Hazardous waste removed and disposed properly	x				The hazardous waste is totally removed from the reservoir site.
Fuels and lubricants spills eliminated				x	The hazardous waste container is placed on the secondary containment, with its volume less than 110%.
Contractor equipment and machinery removed	x				The construction equipment and machinery is totally removed by the Contractor.
All temporary facilities removed and cleaned up	x				All temporary facilities are disassembled and removed from the site.
Streets with installed network reinstated to pre-construction or better conditions				x	The access road is reinstated.
Post-Construction territory reinstated to pre-construction or better conditions	x				The grass sown on the territory is implemented. However additional

16

					inspection is required.
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