

Environmental Monitoring Report

Semestral Report
February 2016

GEO: Urban Services Improvement Investment Program – Project 2

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

Prepared by United Water Supply Company of Georgia, LLC, Government of Georgia for the Asian Development Bank.

Bi-annual Environmental Monitoring Report

Project Number: 43405-023

July-December 2015

Loan Number 2807-GEO (SF)

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 2)
(FINANCED BY THE ASIAN DEVELOPMENT BANK)**

Prepared by: Ketevan Chomakhidze, Environmental Safeguards Specialist
“United Water Supply Company of Georgia”, LLC Tbilisi, Georgia

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

Endorsed by: Maka Goderdzishvili, Head of Division of Resettlement and
Environment Protection

January 2016

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ABBREVIATIONS

ADB	Asian Development Bank
DC	Design Consultant
DREP	Division of Resettlement and Environmental Protection
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
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
WTP	Water Treatment Plant
WWTP	Waste Water Treatment Plant

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PART I – INTRODUCTION

1.1 Construction activities and project progress during the previous 6 months

A. General information about the program/SUBPROJECTS

1. The present Bi-annual Environmental Monitoring Report covers the time period from July till December 2015.
2. 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.
3. 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.
4. The Investment Program will improve the health of residents in the urban centers of Mestia, Anaklia, Kutaisi, Poti, Ureki, Zugdidi and Marneuli. The outcome of the Investment Program is improved WSS services in these urban centers.
5. 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).
6. The following projects are financed under Tranche 2:
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 were scheduled for completion by the mid of August, 2015.
9. **Anaklia Wastewater Treatment Plant (Contract REG-02).** The scope of works includes the construction of a Wastewater Treatment Plant (the treated wastewater to be discharged into Enguri River). The bidder was required to bid for the design and construction of the first

stage of a modular wastewater treatment plant (WWTP) in Anaklia. The design 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. In addition to the WWTP, the Contractor shall design and build the pressure lines leading from the collector network to the WWTP and from the WWTP to the outlet into the river. The contract for construction of Anaklia WWTP was signed on September 22, 2014. Completion date is scheduled on December 6, 2016.

- 10. Construction of Water Supply and Wastewater Network in Ureki.** Construction of Water Supply and Wastewater Network in Ureki/Phase II (URE-01). The project is simultaneously financed from Tranches I, II and III. The main works under Tranche II will comprise laying transmission line with the total length of 29,4 km. (Contract was signed on 22 September 2014 and notice to proceed given on 8 December 2014. project will be completed in 2016).

C. Construction activities and project progress during the previous 6 months

- 11.** Overall physical progress of the work under the ANA-01 project is 100%. No activities taken place during the reporting period of July-December 2015.
- 12.** Construction activities under Mes-02 is 100% Completed. No activities taken place during the reporting period of July-December 2015.
- 24.** Construction Activities during previous 6 months under Reg-02 project (July-December 2015) are shown in the Table 1.

Table 1: Project progress during the previous 6 months

REG-02

REG-02	Anaklia WWTP
Works undertaken during July-Dec 2015	Civil works administrative building: 95% Civil works operational building: 95% Civil works emergency sludge storage: 100% Civil works sludge thickener: 100% Civil works influent pumping station: 100% Civil works firefighting reservoir: 10%

1.2 Changes in Project Organization and Environmental Management Team

- 13.** Agencies Involved in Investment Program Implementation
- 14.** 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.
- 15.** 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. An Investment Program Management Office (IPMO), which is under the Department for Donor Relations (Since October 2015 the name of the former Department of Investment Projects Management is changed) is established within the UWSCG for all Investment Program related functions. The IPMO coordinates construction of subprojects, and ensures consistency of approach and performance. In May 2015 a new director Mr. Nikoloz Kizikurashvili was appointed in UWSCG.

16. UWSCG as responsible IA for the project recruited a Supervision Consultant (SC). 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.
17. 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.
18. 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, if required, a Spoil Disposal Plan and Construction Waste;
 - disposal Plan agreed with the MoENRP and Local Government
19. DC is responsible for developing and incorporation of mitigation measures in design and construction.
20. The environmental specialist (ES) is hired by UWSCG under the USIIP to assist and advise the Resettlement and Environmental Protection Unit (UREP) (the name of Division of Resettlement and Environmental Protection was changed after the reorganization of UWSCG in October 2015) 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 UREP 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.
21. UREP is responsible for the implementation of mitigation and monitoring measures during construction and operation of subprojects under USIIP. Currently UREP is staffed with a Head of Division, who is responsible for both resettlement and environmental issues, and two resettlement specialists.
22. 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

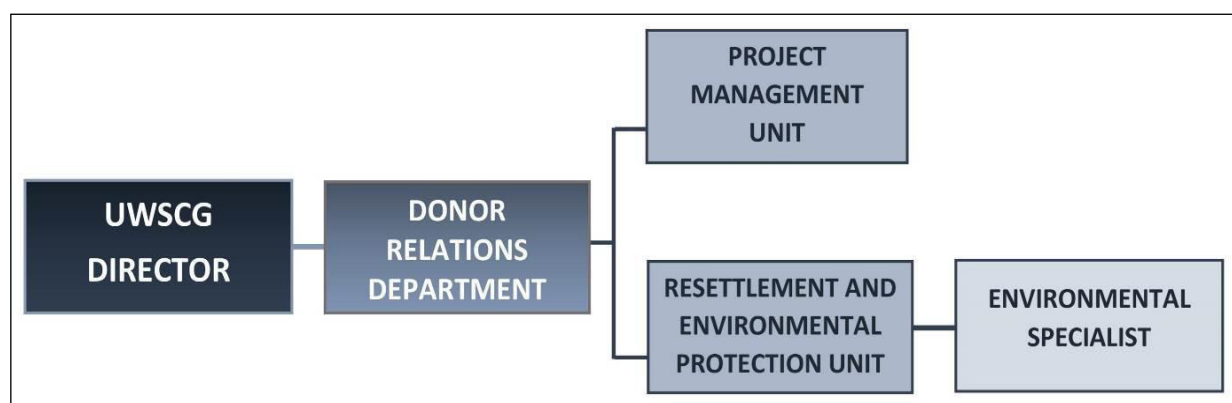
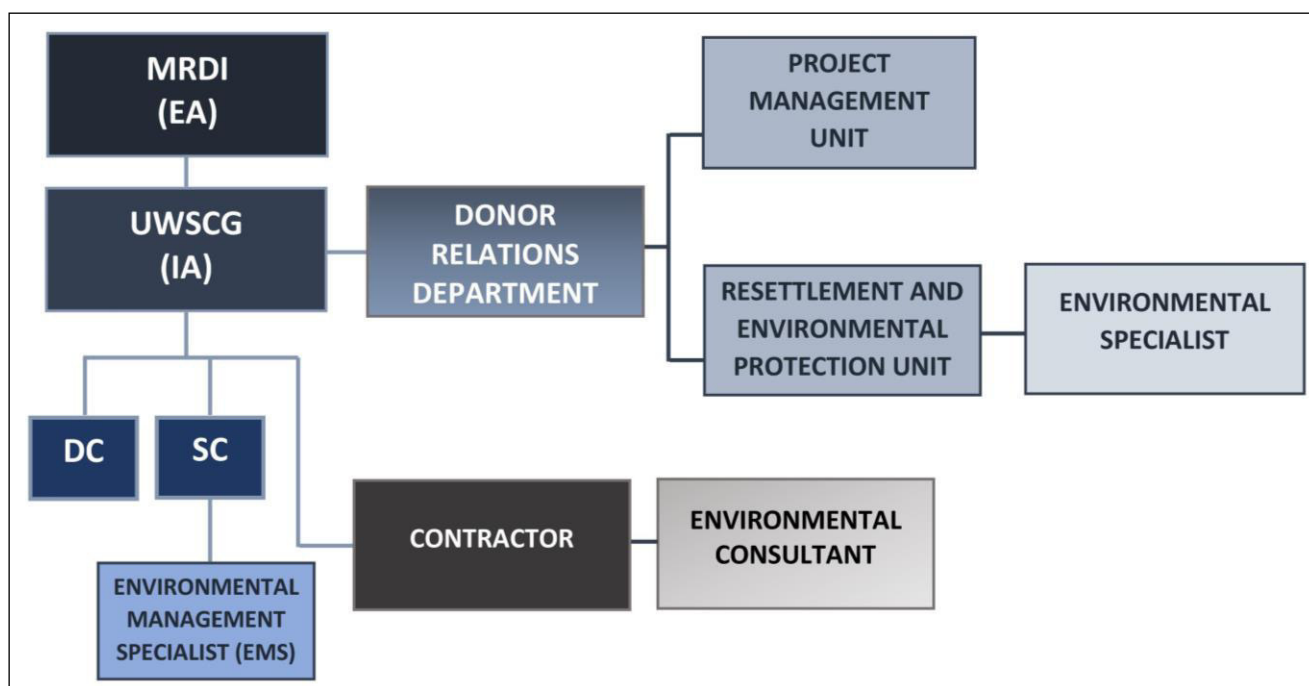


Figure 2: Structure Diagram of the Agencies Involved in Investment Program Implementation



23. Relationships with Contractors, Owner, Lender, etc
24. Relationships with Contractors, Owner and Lender are considered as normal working relationships. At the working level, coordination of environmental issues has been satisfactory, the government agencies, UWSCG, consultants and contractors are in frequent communication and consultation.
25. Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) responsible for oversee progress and provide guidance on the Investment Program implementation; convene regular meetings in consultation with the SC and UWSCG; ensure compliance with Investment Program covenants.
26. Oversight of the USIIP with regards to environmental management is the responsibility of the environmental safeguards team, in particular UWSCG/UREP and the Environmental Specialist of USIIP.
27. The team has constant communication with the Supervision Consultant, Contractor, reviews/ comments all environmental reports submitted by DC, SC and contractors.
28. SSEMPs were prepared by contractor, endorsed by SC/Eptisa and approved by UWSCG/UREP.
29. SC is responsible for environmental capacity building, monitoring of implementation of SEMP and for developing quarterly reports. The Contractor has a full time Environmental Specialist who carries out day to day monitoring and submits monthly progress reports.

30. ADB oversees project sites regularly and gives clear instructions for the project sites improvements with regard to environmental safeguards.
31. To resolve the observed environmental safeguard issues, the regular Environmental Meetings are organized with participation of UWSCG/IPMO/UREP, Eptisa and Contractors. During the meetings environmental issues and implementation of the mitigation measures are discussed.
32. A Grievance Redress Committee has been established within Aan-01 Project for Anaklia, that will be functional for Reg-02 of Anaklia WWTP as well. No grievances have been received under the Reg-02 project as yet.
33. Contractor of REG-02 package operated during the reporting period with the following sub-contractor: Ltd "Prime Concrete".
34. Monthly site meetings have taken place with all Contractors during the reporting period, with a focus on progress and technical problems as well as environmental safeguard issues.
35. Under the REG-02 project contractor has signed agreement with "National Environmental Agency" for the bi-annual monitoring measurements (dust, CO, NO₂, SO₂, noise) of all construction sites.
36. Project organization for the awarded contracts listed above is given in the table 2 below.

Table 2: List of contracts under T2

Contract #	Employer	Contractor
Contract No: (UWSC/ICB/CW/2012/ANA-01)	UWSCG	Joint Venture of Peri Ltd and Modern Business Group LLC
Contract No: (UWSCG/ICB/CW/2011/MES-02)	UWSCG	Joint Venture of New Energy LTD – Georgia and Enguri 2006 LTD (From 11 April 2013 the name of Enguri 2006 LTD has been changed into – New Construction LTD
Contract No: UWSCG/USSIP/ICB/CW/REG-02	UWSCG	JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG (Germany) and ProtechnoSrl (Italy)
Contract No: (P43405-ICB-URE-01)	UWSCG	JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and ProtecnoSrl

PART II - ENVIRONMENTAL MONITORING

37. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of UREP under USIIP on a regular basis, during the period July-December, 2015. Unscheduled monitoring visits were carried out also and non-compliance notes have been issued to the contractor as needed. Mitigation measures to reduce major environmental impacts have been instructed to contractors during the monitoring visits.

38. The monitoring activities included monitoring of compliance of construction activities under Reg-02 project sites to the SSEMP requirements.
39. Environmental Monitoring Specialist hired under the REG-02 subproject conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Eptisa.
40. Environmental Monitoring Specialist of SC developed quarterly monitoring reports for UWSCG/UREP based on the monthly reports submitted by Contractor, and based on environmental site inspection.
41. ES of UREP performed monitoring of contractor's performance with the approved EMPs and SSEMPs, environmental standards and other environmental commitments of the contractor. ES developed bi-annual and annual environmental monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
42. The USIIP's Environmental Impact Monitoring and Mitigation is carried out in accordance with the updated EMPs and SSEMPs prepared by the Contractors. The construction activities affecting the environment are as follows:
 - Site Establishment
 - Site Clearance and Topsoil Stripping
 - Excavation Works
43. The following items are monitored during the implementation of the project: (only REG-02 is reported in this EMR).
 - Air Quality
 - Noise
 - Topsoil Stripping
44. 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.

D. Monitoring Measurement Data

Anaklia Waste Water Treatment Plant (Contract REG-02):

45. The Environmental Measurements were carried out by the National Environmental Agency at various construction sites (at main road connection, at WWTP construction site) in Anaklia.
46. The monitoring measurements were carried out in December 2015 (See Annex A). Location and data are included in the table below (Table 3). The next monitoring measurements will be conducted in May 2016 and results will be reflected in the next January-June EMRs of 2016. According to data received in December 2015 the obtained results did not exceed the National Environmental Standard (Maximum Permissible Level) of Dust, CO, NO₂, SO₂ and Noise, therefore no additional mitigations are required.

Table 3: Monitoring measurements under REG-02

N	Place of measurement	Coordinates	Results				
			Dusts Mg/m ³	CO Mg/m ³	NO ₂ Mg/m ³	SO ₂ Mg/m ³	Noise db
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	70

1.	Anaklia, at Main road connection	0713640 4697365	0.185	0.16	0,001	<0,1	51,2
2.	Anaklia at the construction site	0714137 4697757	0.082	0.27	<0.001	<0,1	50.3

PART III - ENVIRONMENTAL MANAGEMENT

3.1 The Environmental Management System, site-specific environmental management plan (SSEMP) and work plans

47. The Site-Specific Environmental Management Plan (SSEMP) was prepared by the Contractor for Anaklia WWTP under the Reg-02 project, before commencement of construction activities. SSEMP was endorsed by SC/Eptisa and approved by UWSCG.
48. Status of Environmental management plans is summarized in the table below:

Table 4: Status of Environmental management plans

Management Plan	Status	Date of Submission
Environmental Management Plan/Site-Specific EMP (SSEMP) under Reg-02 project, in particular: Anaklia WWTP	Submitted, and approved	July 2015
Company Waste Management Plan (according to Geo legislation) to be agreed with MoENRP	Not submitted	March 2016
Waste Management Plan for ADB as a SSEMP	Not submitted	February 2016

3.2 Site Inspections and Audits

49. Regular site monitoring visits were carried out during the reporting period by Eptisa and UWSCG for REG-02 project. Some monitoring visits were conducted jointly by the SC/EMS and ES of USIIP. During the field visits a number of EHS issues were noted and brought to the attention of the Environmental Consultant and the H&S manager of REG-02 project contractor. Mitigation measures were then discussed with the contractor on-site and detailed instructions were given. Good Practice in compliance with Georgian and international H&S legislation were therefore enforced in accordance with the legislation and the Contractor's contract for REG-02 project.
50. Site inspection and audit during the reporting period have been carried out on: November and December 2015. Monitoring Compliance and inspection monitoring forms have been filled in during the site visits and are presented in Annex C.
51. A summary of the identified issues during the site monitoring by EMS/SC and USIIP ES, recommended mitigations and the status of implementation is presented in Annex D.

Post Construction Audit of Mes-02 Project

- 52.** Mes-02 project Compliance Audit was carried out in November 2015. The Compliance Audit Report was 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 main findings Revealed during the Documents Review and Site Visits include:
- 53.** In terms of environment at the project implementation stage strong negative impact on environment was not expected. According to the ADB instructions the project fell under Category B. According to Georgia legislation Environmental Impact Assessment document preparation and obtaining relevant permit was not necessary for project implementation;
- 54.** All documents developed under the project (Loan Agreement, PAM, Contracts) included the obligation to implement the project according to the ADB SPS 2009 as well as pursuant to the environmental requirements stipulated in Georgia legislation;
- 55.** No incidents have occurred during the construction stage and no complaints have been initiated by the residents;
- 56.** All project implementing units had hired environmental specialist with relevant qualifications;
- 57.** At the project implementation stage permanent trainings were held for contractor, as well as those specialists of all organizations involved in the project that dealt with environmental issues;
- 58.** Under the project UWSCG and SC environmental specialists performed permanent environmental monitoring during spring to autumn seasons. Non-compliances identified by them adequately and corrective actions were planned. The effectiveness of corrective actions were also controlled by the above-mentioned specialists;
- 59.** During the Construction phase, the Contractor rented the territory in settlement Mestia to build a construction camp. The construction materials needed for the project were temporarily stored in the construction area which was fenced and equipped with water and sewage supply system. The camp was not used as a dwelling space.
- 60.** The camp area was cleared off the construction materials. However, there were facts of uncontrolled placement of small construction waste here. These are mostly plastic and rubber cuts of the construction materials.
- 61.** Most of the trench filling and area restoration works are done satisfactorily. The facts of incomplete asphalt cover restoration were fixed at 7 locations.
- 62.** Main recommendations of the audit report included the following: The construction waste placed in an uncontrolled manner in the camp area should be collected and handed down to the relevant organization to be further placed on the landfill;
- 63.** The territories, which are not completely restored, should be restored by meeting the requirements. After the works are complete, the supervision consultant should audit the restored territories and determine the quality of the accomplished works.
- 64.** The non-compliances that were revealed by the independent auditor during the preparation of Compliance environmental audit report were partially improved by contractor within the reporting period. Construction waste placed in uncontrolled manner in the camp was immediately collected and removed from the camp site by the relevant certified company responsible for the waste management. As for the complete restoration of project sites UWSCG and Eptisa asked contractor to develop a Corrective action plan to improve the situation. Performed corrective actions will be reflected in a bi-annual EMR of January-June 2016.

3.3 Non-Compliance Notices

REG-02

65. All corrective actions requested after the Monitoring of sites were mostly improved by contractor. There was no “Non-compliance notice” issued during the course of the construction supervision in the previous six months. However several issues were discussed with contractor on site and instructions were given to improve the situation. Actions taken for implementation of mitigation measures under Reg-02 are described in Table 5 below.
66. Waste management and safety issues are well managed on the site. Waste containers are placed at the special dedicated places with relevant indication signs for Household and Hazardous waste. Municipal waste is disposed by Zugdidi Municipal Cleaning Service permanently on contractual bases. Bio toilets are also installed at the site. There were no non-compliances in waste management during the site visits.
67. All permits, licenses and agreements are on place and available at camp site.

3.4 Corrective Action Plans

68. For the purpose of resolving the observed issues instructions were given to contractor and regular environmental meetings were carried out with the participation of UWSCG/IPMO/UREP, Eptisa, contractors. During the meetings environmental issues and implementation of the mitigation measures were discussed.

Table 5: Actions taken for implementation of mitigation measures under REG-02 by the end of December 2015

REG-02

Construction Site	Environmental Issues	Action taken
	Site internally should be arranged properly and cleaned regularly. All construction materials should be properly stored.	Partially Completed
	Non-hazardous waste container should be collected timely to avoid overfilling	Completed

69. These issues were captured in project photos and are shown in Annex B.
70. An Annual Environmental Compliance Safeguard Review Mission was carried out on 7-9 October 2015 by the RETA National Environmental Safeguards Consultant to review environmental safeguards compliance of USIIP projects.

3.5 Actions taken to reflect the findings of ADB mission carried out on 7-9 October 2015:

Project	Specific Issues	Deadline for submission/Implementation	Implementation Status
Status of findings of ADB mission carried out on 7-9 October 2015			

Construction of the Waste Water Treatment Plant in Anaklia – T 2			
Reg-02 Anaklia WWTP	In order to monitor measurements under the REG-02 project, Contract was signed with “Environmental Agency”. Measurements of air, water and noise quality will be performed every 6 months. First measurements will be due in December, 2015 and will be reflected in next Jul-Dec 2015 Bi-Annual EMR.	December, 2015	Done
Mes-02	Final Environmental Audit Report for the completed subproject - USIIP, Tranche 2 - Construction of Mestia Sewage Distribution Network (MES 02) is under preparation and will be due in November, 2015.	November 2015	Done in December 2015

3.6 Consultations and Complaints

Public Awareness Activities

Trainings

71. In July-December 2015 regular meetings were held for the households living in Anaklia. with participation of PR department of UWSCG head office as well as the UWSCG local office, contractor’s and Eptisa’s public awareness specialists.
72. More than 900 households were provided with the brochures and information about the project and planned activities. These brochures include information about the GRM System and GRC.
73. Instruction type environmental safeguard trainings were organized for environmental representatives of Reg-02 and introduced them with necessary safeguard requirements.
74. The main issues of discussion were the obligations of contractor in terms of environmental safeguards and issues that are to be managed during construction process.
75. The issues of discussion were as follows:
 - Environmental Management Plan and its implementation
 - Site Specific Environmental management plans and its implementation
 - Potential environmental negative impacts during construction process
 - All necessary environmental mitigation measures

Grievance redresses mechanism (GRM)

76. For the effective implementation of GRM system under the USIIP, UWSCG issued special order (#122) on 30 April 2014. The “Establishment of GRM within the Framework of the Asian Development Bank Funded Projects” signed by the head of UWSCG gives clear instructions to every involved stakeholder how to act when affected people are impacted by the project. Detail procedures for GRM System is provided in Annex E. GRM system which was established under the Ana-01 project of USIIP is functional for Reg-02 project as well. No compliance has been received under the Reg-02 project during the reporting period.

PART IV – CONCLUSIONS AND ACTION PLAN FOR THE NEXT PERIOD

4.1 Conclusions and recommendations

77. As presented in this report, Tranche-2 of this Investment Program is being implemented in compliance with the ADB Safeguards Policy Statement, 2009, National Legislation and overall EARF.
78. Necessary instructions have been given to the Contractor by UWSCG and SC to follow the EMPs and SEMP for REG-02 project.
79. More detailed recommendations are with indication of the entities responsible for their implementation are provided in the table below:

Table 6: Recommendations to Address Environmental Issues

Recommendations REG-02 Anaklia WWTP	Responsible Party
Site internally should be arranged properly and cleaned regularly. All construction materials should be properly stored.	Contractor
Non-hazardous waste container should be collected timely to avoid overfilling	Contractor

4.2 Action Plan for the next period

80. Conduct monitoring of environmental quality under REG-02 project at Anaklia WWTP site. The specific plan for measurement is as follows:

Parameters	Quarterly measurement
Dust	May 2016
Vibration	May 2016
carbon monoxide	May 2016
nitrogen dioxide	May 2016
sulfur dioxide	May 2016
Noise	May 2016

81. Develop Company Waste Management Plan and agreed with MoENRP (March 2016)
82. Develop Waste Management Plan for ADB as a SEMP (February 2016).

ANNEX A: MEASUREMENT DATA

Agreement # pm-3/53

Concentrations of Harmful Substances in the Atmospheric Air and Noise Measurement

ინფორმაცია
ატმოსფერულ ჰაერში მაცნე ნივთიერებათა შემცველობის შესახებ
ხელშეკრულება #ფმ-3/53
შპს „ლუდვიგ პვაიფერ ჰოხ უნდა ტიფზაუ და კო.კგ“

20.01.2016 წ.

სინჯის აღების ადგილი კორდინატები	ხმაური, დბ	მტვერი, მგ/მ³	გოგირდის დიოქსიდი, მგ/მ³	აზოტის დიოქსიდი, მგ/მ³	ნახშირჟანგი, მგ/მ³
ანაკლია, X 0713640 Y 4697365	51,2	0.185	<0.1	0.001	0.16
საწარმოს ტერიტორია, X 0714137 Y 4697757	50.3	0.082	<0.1	<0.001	0.12
ურეკი, X 0730237 Y 4650518	44,7	0.021	<0.1	0.003	0.27

შემსრულებლები:

მთავარი სპეციალისტი

უფროსი სპეციალისტი

[Signature]

ომარ ყენია

[Signature]

გიორგი ხაჩიშვილი

შეთანხმებულია:

გარემოს დაბინძურების მონიტორინგის
დეპარტამენტის უფროსი



მარინე არაბიძე

ANNEX B: PHOTOS OF SITES



Anaklia WWTP Site: Workers equipped with PPE



Anaklia WWTP site: Entrance Gate

ANNEX C: MONITORING REPORTS

MITIGATION COMPLIANCE & INSPECTION MONITORING FORM

Project: Improvement of Anaklia Water Supply Sub-Project	Attendees, Name / Position:
	1. Mamuka Bokhua Eptisa
Scope of inspection: Anaklia WWTP	2. Nikoloz Nephariidze "Pfeiffer" contractor
	3.
Date: 08.10.2015	4.
Responsible person: Irakli Legashvili Environmental specialist of Eptisa	5.
Ketevan Chomakhidze Environmental specialist under UWSCG	6.
	7.

Construction Activity	Mitigation Measure (as per EMP/SEMP)	Mitigation Implemented		Mitigation Effective* 1 to 5	Corrective Action Request (CAR) including deadline for effective CA.	Resolution Status of previous CAR (resolved/outstanding actions required)
		Yes	No			
Site Clearance, topsoil stripping.	Limits of clearing marked with highly visible means	x		2		
	Clearing of shrub, bushes and grass shall only be limited to actual construction area	x		2		
	Fencing of trees located at the construction site to avoid its damaging	x		2		

	Top soil of about 30 cm depth shall be removed and stored separately in appropriate location	x		2		
Site establishment, excavations/refilling and materials delivery	Ensure adequate fencing (with relevant height of fence) of construction area	x		2		
	Exclude public from the site – enclose construction area, provide warning and sign boards, security personnel	x		2		
	Provide adequate lighting to avoid accidents	x		2		
	Organize proper place for washing of trucks wheels with concrete flooring and separate drainage		x		Trucks wheel washing relevant platform and its drainage should be installed	Needs timely action
	Provide warning signs or safety tapes around to all open tranches		x		Not applicable at the moment	
	Provide relevant information signs at the site	x		2		
	Arrangement of parking area at the construction site with relevant information signs	x		2		
	Proper arrangement of construction site including internal access roads (with gravel)	x		2		
	Arrangement special storage (with roofing and concrete flooring) for containers of fuel and lubricants	x		2		
	Ensure that all equipment & vehicles used for construction activity are in good condition (non-leaking) and are well maintained	x		2		
	Allocation of fuel and lubricants spill elimination items (sand, sawdust, special containers) at the construction site		x		It is necessary to have special items (sand, sawdust, special containers) at the construction site	

	Placement of Household Waste containers at the special dedicated place with relevant indication signs (for example “Household Waste)	x		2		
	Placement of properly Hazardous Waste containers at the special dedicated places with relevant indication signs (for example “Hazardous Waste”)	x		2		
	Regularly cleaning of construction area	x		2		
	Provide prior information to local people about work	x		2		
	Utilize surplus/waste soil for beneficial purposes such as in construction or to raise the ground-level of low lying sites. Dispose extra waste soil at Local Municipal Landfill in correct manner	x		3	At the site there is separately allocated surplus/waste soil that will be used for the construction purposes	
	Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required		x		Not applicable at the moment	
	Limiting working hours to 8 am – 6 pm, minimize the noise whenever possible	x		2		
	Ensure that all workers are provided with and use appropriate Personal Protective Equipment - helmets, hand gloves, boots, masks, safety belts (while working at heights etc)	x		2		
	Maintain accidents records and report regularly	x		2		
	Stopping work immediately to allow further investigation if any historical or archaeological finds are suspected	x		2		

	Ensure proper compaction of refilled soil the material shall be refilled in layers and compacted properly layer by layer	x		2		
	Plan transportation routes in consultation with Municipality and Police	x		2		
	Speed limit between 30 km/h within residences and avoid use of horn in the town	x		2		
	Bring the material (aggregate and sand) as and when required	x		2		
	Watering unsatisfied /bad condition roads to avoid dust generation while using for transport of waste/material	x		2		
	Use tarpaulins to cover loose material that is transported to and from the site by truck	x		2		
	Clean wheels and undercarriage of haul trucks prior to leaving construction site		x		Trucks wheel washing equipment still needs to be installed at the construction site	
	To the extent possible labor force must be drawn from the local community; Contractor should at least source 50% of unskilled labor force from local	x		2		
	Install proper concrete mixers washout pit and separate drainage		x		Concrete mixer trucks washout should be performed either at the Batching Plant or at the concrete washout pit (plastic-lined) specially installed for concrete mixer trucks washing	Needs timely action
Reinstatement						

* Mitigation Effectiveness Rating Criteria

- 1-Very Good
- 2-Good
- 3-Fair
- 4-Poor
- 5-Very Poor

Photos of Anaklia sites



MITIGATION COMPLIANCE & INSPECTION MONITORING FORM

Project: Improvement of Anaklia Water Supply Sub-Project	Attendees, Name / Position:
	7. Mamuka Bokhua – “Eptisa”
Scope of inspection: Anaklia WWTP	8. Irakli Abuladze “Pfeiffer” contractor
	9.
Date: 03.12.2015	10.
Responsible person: Irakli Legashvili Environmental specialist of Eptisa	11.
Ketevan Chomakhidze Environmental specialist under UWSCG	12.
	7.

Construction Activity	Mitigation Measure (as per EMP/SEMP)	Mitigation Implemented		Mitigation Effective* 1 to 5	Corrective Action Request (CAR) including deadline for effective CA.	Resolution Status of previous CAR (resolved/outstanding actions required)
		Yes	No			
Site Clearance, topsoil stripping.	Limits of clearing marked with highly visible means	x		3	More safety and visible signs should be provided at the perimeter of the site	Needs timely action
	Clearing of shrub, bushes and grass shall only be limited to actual construction area	x		2		
	Fencing of trees located at the construction site to avoid its damaging	x		2		
	Top soil of about 30 cm depth shall be removed and stored separately in appropriate location	x		2		
Site establishment,	Ensure adequate fencing (with relevant height of fence) of construction area	x		2		

excavations/refilling and materials delivery	Exclude public from the site – enclose construction area, provide warning and sign boards, security personnel	x		2		
	Provide adequate lighting to avoid accidents	x		2		
	Organize proper place for washing of trucks wheels with concrete flooring and separate drainage		x		Trucks wheel washing relevant platform and its drainage should be installed	Needs timely action
	Provide warning signs or safety tapes around to all open tranches		x		Not applicable at the moment	
	Provide relevant information signs at the site	x		2		
	Arrangement of parking area at the construction site with relevant information signs	x		2		
	Proper arrangement of construction site including internal access roads (with gravel)	x		2		
	Arrangement special storage (with roofing and concrete flooring) for containers of fuel and lubricants	x		2		
	Ensure that all equipment & vehicles used for construction activity are in good condition (non-leaking) and are well maintained	x		2		
	Allocation of fuel and lubricants spill elimination items (sand, sawdust, special containers) at the construction site		x		It is necessary to have special items (sand, sawdust, special containers) at the construction site	Needs timely action
	Placement of Household Waste containers at the special dedicated place with relevant indication signs (for example “Household Waste)	x		3	Non-hazardous waste containers should have clear indication signs, and wastes should be segregated in a way to avoid mixing with hazardous stream	Needs timely action
	Placement of properly Hazardous Waste containers at the special dedicated places with relevant indication signs (for example	x		3	Should be installed proper Hazardous Waste containers at the special dedicated places with relevant	Needs timely action

	"Hazardous Waste")				indication signs and cover. Hazardous Waste should be manage properly	
	Regularly cleaning of construction area	x		3	Construction site should be cleaned regularly. Construction equipment and materials should be better organized	Needs timely action
	Provide prior information to local people about work	x		2		
	Utilize surplus/waste soil for beneficial purposes such as in construction or to raise the ground-level of low lying sites. Dispose extra waste soil at Local Municipal Landfill in correct manner	x		3	At the site there is separately allocated surplus/waste soil that will be used for the construction purposes	Needs timely action
	Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required		x		Not applicable at the moment	
	Limiting working hours to 8 am – 6 pm, minimize the noise whenever possible	x		2		
	Ensure that all workers are provided with and use appropriate Personal Protective Equipment - helmets, hand gloves, boots, masks, safety belts (while working at heights etc)	x		2		
	Maintain accidents records and report regularly	x		2		
	Stopping work immediately to allow further investigation if any historical or archaeological finds are suspected	x		2		
	Ensure proper compaction of refilled soil the material shall be refilled in layers and compacted properly layer by layer	x		2		
	Plan transportation routes in consultation with	x		2		

	Municipality and Police					
	Speed limit between 30 km/h within residences and avoid use of horn in the town	x		2		
	Bring the material (aggregate and sand) as and when required	x		2		
	Watering unsatisfied /bad condition roads to avoid dust generation while using for transport of waste/material		x		Not applicable at this moment. The construction process does not need dust prevention activities in rainy season	Needs timely action
	Use tarpaulins to cover loose material that is transported to and from the site by truck	x		3	Transports are not always covered while transporting materials	Needs timely action
	Clean wheels and undercarriage of haul trucks prior to leaving construction site		x		Trucks wheel washing equipment still needs to be installed at the construction site	Needs timely action
	To the extent possible labor force must be drawn from the local community; Contractor should at least source 50% of unskilled labor force from local	x		2		
	Install proper concrete mixers washout pit and separate drainage		x		Concrete mixer trucks washout should be performed either at the Batching Plant or at the concrete washout pit (plastic-lined) specially installed for concrete mixer trucks washing	Needs timely action
Reinstatement						

* Mitigation Effectiveness Rating Criteria

- 1-Very Good
- 2-Good
- 3-Fair
- 4-Poor
- 5-Very Poor

Photos of Anaklia WWTP site



ANNEX D: IMPLEMENTATION REPORT ON THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) /INITIAL ENVIRONMENTAL EXAMINATION (IEE) MITIGATION REQUIREMENTS:

Reference	Requirement	Action to date	Action required/comment
Reg-02 Anaklia WWTP			
	Top soil of about 30 cm depth shall be removed and stored separately in appropriate location	Completed	Contractor is instructed to follow all the required national and international standards regarding the storage of top soil
	Ensure adequate fencing (with relevant height of fence) of construction area	Completed	No additional actions are required
	Arrangement special storage (with roofing and concrete flooring) for containers of fuel and lubricants	Completed	Maintain the same standard
	Ensure that all equipment & vehicles used for construction activity are in good condition (non-leaking) and are well maintained	Completed	Maintain the same standard
	Fuel/oil spill response items should be available at the site even if there is no high risk of fuel/oil spill	Completed	Maintain the same standard
	Site internally should be arranged properly and cleaned regularly. All construction materials should be properly stored	Partially completed	Instruction is given to contractor to improve the situation
	Hazardous Waste containers should be installed with relevant signs	completed	No additional actions are required
	All workers (even personnel of subcontractor) should be equipped with complete PPE	Completed	Maintain the same standard
	Arrange lockable gate in entrance with relevant information signs	Completed	No additional actions are required
	Non-hazardous waste container should be collected timely to avoid overfilling	Completed	Maintain the same standard
	Parking area is arranged and there is proper parking sign and vehicles are parked in right place	Completed	No additional actions are required
	Trucks wheel washing relevant	Completed	No additional actions are required

	platform and its drainage should be installed		
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ANNEX E: GRIEVANCE REDRESS MECHANISM

GRM System

83. For the effective implementation of a GRM system under the USIIP, UWSCG issued special order (#122) on 30 April 2014. The “Establishment of GRM within the Framework of the Asian Development Bank Funded Projects” signed by the head of UWSCG gives clear instructions to every involved stakeholder how to act when affected people are impacted by the project.
84. After issuance of the special order, a GRM was first set up by UWSCG under the REG-01 project of USIIP (operational since April, 2014) that includes rehabilitation of water supply system in Kutaisi. The GRM allows affected people to appeal any disagreeable decision, practice or activity arising from project implementation.
85. Any affected person can apply at a UWSCG local service centre through different ways, either by going to the service centre, sending a letter to the service centre, or calling a hotline. The operators of the service centre can respond by going directly to the affected person if they are disabled to get the written grievance from them.
86. During the first stage, complaints are discussed within two weeks of being received by the local service centre of UWSCG, based on the verbal or written complaint. In the first stage of grievance review and resolution, an authorized representative of the local service centre is responsible for ensuring the registration of the claim and its further processing. He/she engages in the grievance review and resolution process representatives (managers and environmental specialists) of Construction and Supervision Companies, and the representatives of UWSCG central office as required. At the local service centre, the affected person is provided with a queue number and then registers the grievance at the service desk.
87. The service centre operators, who are trained¹ in USIIP/Reg-01project, register all relevant grievances with support of an online task management system, which tracks information on the grievance review process and the responsible person. Moreover, the operators fill the ADB complaints log with the registered grievance that coincides with local internal forms. This electronic intranet system² allows the UWSCG Tbilisi Office to immediately see claims. Therefore, claims submitted to any regional service centre can be monitored by the Head of the Investment Projects Management Office (IPMO), as well as the Head of the Environmental and Resettlement Division, Maka Goderdzishvili.
88. When a grievance is solved positively in the first stage, the grievance is closed through an Agreement Protocol, which is reflected in the e-Document – Task Management System.
89. The grievance enters a second stage if it is not solved. In that case, the authorized representative of the local service centre will help the claimant prepare a package of grievance application documents for official submission to the Grievance Redress Committee (GRC). The package contains the following information:
 - Name, ID, address and contact details of the claimant
 - Description of the essence of the complaint

¹ UWSCG and Supervision Consultant (Eptisa) conducted trainings for service center operators covering general procedures of GRM functioning in order to ensure proper coordination of different departments.

²The **eDocument - Task Management System** was developed by LEPL Financial-Analytical Service of the Ministry of Finance of Georgia. It is an innovative electronic document and task management mechanism for electronically processing of documents. Used by almost all the major budgetary organizations in Georgia, the e-Document service offers an opportunity to manage, find, and track documents for information-intensive organizations.

- Supporting documents and evidences (photos, maps, drawings/sketches, conclusion of experts or any other documents confirming the claim)
 - Brief description of the actions proposed for the grievance resolution at the first stage and the reasons why these actions were denied
 - Minutes of meetings conducted at the first stage
- 90.** The GRC should make a decision within two weeks after the registration of the grievance. The GRC is staffed as follows: (i) Representative of self-government – the head of committee; (ii) 99. Director/ Manager of UWSCG service centre; (iii) Investments Project Management Division representative of the company; (iv) Representative of local authoritative NGO (according to the claim reference); (v) Stakeholders' female representative;(vi) Stakeholders' informal representative; and (vii) Heads of local municipalities.
- 91.** The GRC will review the package of grievance documents, set a date for a meeting with the claimant, discuss the claim at the meeting, and set up a plan for further actions (actions, responsible persons, schedule etc.). Upon the resolution of the case, the GRC will prepare a brief resume and protocol and the protocol signed by complainant and all parties will be registered in a grievance log.
- 92.** There is a third stage in case there is a failure to resolve the grievance. In this case, GRC will help the claimant to prepare the documents for submission to the Rayon (municipal) court. They can also apply to ADB at the address below:
- *Complaints Receiving Officer, Accountability Mechanism*
 - *Asian Development Bank Headquarters*
 - *6 ADB Avenue, Mandaluyong City 1550, Philippines*
 - *Email: amcro@adb.org, Fax +63-2-636-2086*