

ENVIRONMENTAL MONITORING REPORT

Final Bi-annual
January – June 2014

Georgia: Urban Services Improvement Investment Program (Tranche 1)

Prepared by “United Water Supply Company of Georgia”, LLC Tbilisi, Georgia for the Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank

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ABBREVIATIONS

ADB	Asian Development Bank
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP	Environmental Management Plan
GoG	Government of Georgia
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
DREP	Division of Resettlement and Environmental Protection
MoRDI	Ministry of Regional Development & Infrastructure
UWSCG	United Water Supply Company of Georgia

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I. INTRODUCTION

1. The present Bi-annual Environmental Monitoring Report covers the time period from January 2014 till June 2014.
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 headworks, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works will include sewer network, trunk sewers and sewage treatment facilities.
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 1 of the Investment Program includes: Construction of Mestia Headworks (MES-01); Construction of Mestia Water Treatment Plant and Reservoirs (REG-02), Improvement of Water Supply Infrastructure in Anaklia, Kutaisi and Poti (REG-01) and UWSCG office building.
6. The following projects are financed under Tranche 1:

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

The contract MES-01 was signed with Joint Venture of Dagi LTD – Georgia and Enguri 2006 LTD – Georgia (From 11 April 2013 the name of Enguri 2006 LTD has been changed into - New Construction LTD) on 10 October 2011 and scheduled Time for Completion was

on 31 October 2013. The contract has completed the works on the reservoir, the intake, and the transmission pipeline, including its testing and the installation of the last section in the LARP Corridor. LARP compliance report has been drafted and will be issued by EPTISA early July 2014. Taking over of the facilities is scheduled to take place by mid of July 2014.

KUTAISI, POTI & ANAKLIA Water Supply Infrastructures (Contract REG-01). The scope of works includes improvement of water supply infrastructure in Anaklia, Kutaisi and Poti, in particular, reservoirs and pumping stations, transmission lines and distribution lines of water supply systems as well as a water treatment plant in Poti. The project envisages installation of water pipelines on 96 km. Concrete water reservoirs will be built on 5 places with total capacity of 35 000m³. The project also covers construction of 4 pumping stations (with total capacity of 4 516m³/h) as well as construction of water treatment facility. Works worth of 26 422 935 GEL will be implemented in Kutaisi, as a result of which 14 000 households will receive 24 hour water supply whereas 36 000 household will see their water supply services improved.

United Water Supply Company under the Ministry of Regional Development and Infrastructure of Georgia signed a contract (#UWSCG/ICB/CW-2013-REG-01) with an agreement with Spanish Cobra Instalaciones y Servicios. The Contract is effective since mid of Sept. 2013 and most activities since then were focused on pre-construction including surveying and designing the works as well as procurement of goods.

TBILISI Office Building: Detailed design for construction of a new head office of UWSCG has been prepared that was funded by the GoG. The site for the construction of Head office for UWSCG had been relocated in coordination with the Governmental agencies thus preparation of a new IEE is required. The draft IEE for the head office building has been accomplished and is already submitted to ADB on July 25, 2014. In the process of preparation IEE document some essential studies have been carried, namely - site baseline survey and biodiversity study of project area. Moreover, public consultations related to head office construction project took place with nearby settlements and public hearing meeting was organized for every stakeholder on 2 July 2014.

The new construction area is located in the suburb area of the city in close proximity with Tbilisi State University. Number of door-to-door public consultations have been carried out with local population. The specially developed invitation letters prior to the Public Hearing, signed by the head of UWSCG was distributed among the local population and stakeholders.

MESTIA Water Supply Facilities (Contract REG-02). The scope of works includes: a new modular water treatment plant (WTP); the rehabilitation of Tsmiashi spring catchment; the rehabilitation of Lanchvali reservoir (1,000 m³); a new reservoir at Lanchvali (1,000 m³); a

new high level reservoir (2,000 m³); a new reservoir at water treatment plant (2,000 m³); transmission pipes of approximately 9,200 meters.

The Contractor has to design and build a WTP with a treated water standard that complies with the European standard for the drinking water quality and is defined in the Council Directive 98/83/EC. The new WTP will have a design capacity of 80 l/s to serve the projected population in 2040. Some of the components (hydrocyclone, micro-/ultrafiltration, drinking, process and backwash water pumps) to be constructed under this contract will be for half of the design population in 2040 at this stage. Contract award is planned for the third quarter of 2014. Within the reporting period UWSCG has submitted the Second Stage Bid Evaluation Report to ADB for their review and no-objection.

7. The Project's Environmental Impact Monitoring and Mitigation is carried out in accordance with the updated EMPs and Site-Specific Environmental Management Plans SEMP's prepared by the Contractor. The construction activities affecting the environment are as follows:
 - Contractor's mobilization and site installation
 - Excavation works
 - Removal of soil
 - Backfilling of trenches
8. The following items are monitored during the implementation of the project: (only MES-01 and REG-01 is reported in this report).
 - Air Quality
 - Noise
 - Vibration
 - Reinstatement of top soil
 - Removal of vegetation/trees for construction
9. 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.

A. Construction activities

10. Construction Activities during previous 6 months under Reg-01 project (January 1, 2014 - June 30, 2014)

KUTAISI LOT

REG-01 (KUT)	KUTAISI water distribution networks
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Sites	1. Kutaisi - streets
	<ul style="list-style-type: none"> ➤ Tsereteli street; Batumi street; Khakhanashvili street; Jibladze street: completed the reconnection to existing system as well as reinstatement works ➤ Erevani street: pipe laying , service connections and reinstatement ➤ Gelati street: pipe laying and interconnection with Kupradze main ➤ Kupradze street : installation of all bypasses incl. service connections; interconnection to existing system; ➤ Solomon: installation of service lines; ➤ Erdoshvili street: installation of pipes, laterals, and reconnection to existing system (completed) Rionhesi street: installation of pipes and laterals Luka Asatiani street: installation of pipes, laterals and reconnection to existing system (completed) ➤ Tsminda Sameba: Kipiani; Leselidze; Nekrasovi; and Uznadze streets: same as above ➤ Chabukiani street: installation of OD315 distribution main from Tetramista interconnection to Koguashvili ➤ Kldiashvili street: installation of distribution main in same trench as transmission pipe; reconnection to existing feeding system from Rionhesi

REG-01 (KUT)	KUTAI SI transmission pipelines
Sites	1. Vazha Pshavela-Tetramista pipeline 2. Tetramitsa-Leselidze-Kldiashili pipeline 3. Kldiashvili-TV Tower pipeline
	<ul style="list-style-type: none"> ➤ Installation works (pipes) and reinstatement

REG-01 (KUT)	KUTAI SI reservoirs & pump stations
Site	TV Tower reservoir
	No construction work has started for this investment; Expected date of commencement. Spring 2015
Site	Tetramistal reservoirs
	No construction work has started for this investment; Date of commencement: 25 July 2014.
Sites	Vazha Pshavela reservoir & pumping station
	<ul style="list-style-type: none"> ➤ Execution of bypass DN 900 incl. interconnection to existing inlet ➤ Start construction of pump station PS-1 (slab, walls, cover) ➤ Complete excavation and laying of drains ➤ Placing of cyclopean concrete for R1 and PS-2

	<ul style="list-style-type: none"> ➤ Reconditioning of existing slab (R2, R3) ➤ Shuttering, reinforcement and concreting of foundation slab for R1 and PS-2
Site	Kldiashvili reservoir & pumping station
	<ul style="list-style-type: none"> ➤ Shuttering, reinforcement and concreting of slab, walls and cover ➤ Drainage works

ANAKLIA LOT

REG-01 (ANA)	ANAKLIA reservoir
Site	1. Darcheli site incl.: Pump Station; 4,000 m3 ground reservoir and chlorination station
	<ul style="list-style-type: none"> ➤ Complete earth works for pump station ➤ Completed fill and compaction for reservoir and pump station ➤ Installation of drainage system ➤ Shuttering, reinforcement and concreting of bottom slab (reservoir and pump station) ➤ Start shuttering, reinforcement and concreting of walls for reservoir and pump station ➤ Managing health and safety barriers, PPE equipment, road and relevant signs

REG-01 (ANA)	ANAKLIA wells and transmission pipelines
Sites	<ol style="list-style-type: none"> 1. Kakhati-Darcheli res. transmission main pipeline 2. Darcheli-Anaklia branch pipeline 3. Darcheli-Ganmukhuri branch pipeline 4. Kakhati well #1 (installation) and well #2 (drilling and installation)
	<ul style="list-style-type: none"> ➤ Setting out of works of sections 1 and 2 based on final topographic surveys ➤ Installation works (pipe placing, jointing, initial backfill/cover, main backfill) for section 1 (approx. 6 km laid) and section 2 (approx. 2 km laid)

POTI LOT

REG-1 (POT)	Nabada reservoirs and pump station
Sites	<ol style="list-style-type: none"> 1. Nabada pump station, operating building and access road 2. Nabada reservoirs
Works Undertaken	<ul style="list-style-type: none"> ➤ Execution of piles for pump station (45 nos.) ➤ Lean concrete and execution of base slab of PS (reinforcement

during January-June 2014	<ul style="list-style-type: none"> and concreting) ➤ Final backfill and compaction of operating building; lean concrete ➤ Complete earth works for reservoir N4 and N5 ➤ Backfilling and compaction of access road ➤ Completed earth works for drainage channel and installation of drainage pipes
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REG-01 (POT)	POTI other sites:
Sites	<ol style="list-style-type: none"> 1. Grueli spring and WTP 2. Nosiri well field 3. Village networks
Works Undertaken	<ul style="list-style-type: none"> ➤ Grueli WTP: works will start end of 2014 ➤ Nosiri: works will start in Sept. 2014 ➤ Village networks: works will start in Aug. 2014

11. Construction Activities during previous 6 months under Mes-01 project (January 1, 2014 - June 30, 2014)

MES-01

MES-01 (water)	Water Supply Headworks
Sites	<ol style="list-style-type: none"> 1. Intake structure 2. Zargazhi reservoir 3. Lanchavil reservoir 4. Transmission pipelines from Intake to Zargazhi and from Zargazhi to Lanchavil
Works Undertaken during S-1/2014	<ul style="list-style-type: none"> ➤ 0.958 km of transmission pipes installed ➤ 1.850 km of transmission pipes tested ➤ 2 interconnection chambers built at Lanchavil ➤ Disinfection, flushing and commissioning of transmission pipeline ➤ Test at completion for transmission system

12. Site-Specific Environmental Management Plans (SEMPs) were prepared by the environmental specialist of Contractor according to construction activities schedule for each project site. The status of SEMPs preparation and submission within REG-01 contract is shown in the below table.

Table 1: status of SEMPs preparation within REG-01 contract

No	Construction Sites	Draft SEMPs	Updated SEMPs	Endorsement date/SC	Approval date/UWSCG
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1.	Vazha Phshavela (Kutaisi)	16.11.2013	13.12.2013	19.12.2013	January 2014
2.	Kldiashvili (Kutaisi)	02.11.2013	13.01.2014	13.02.2014	May 2014
3.	Tetramitsa (Kutaisi)	09.07.2014			
4.	TV Tower (Kutaisi)	09.07.2014			
5.	Nabada (Poti)	01.12.2013	11.12.2013	19.12.2013	January 2014
6.	Darcheli (Anaklia)	15.11.2013	07.12.2013	09.12.2013	January 2014

B. Environmental Management Team

(i) Agencies Involved in Investment Program Implementation

13. 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
- 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 Department for Investment Projects Management (the name of department is changed from April 2014) is established within the UWSCG for all Investment Program related functions. The IPMO coordinates construction of subprojects, and ensure consistency of approach and performance
- UWSCG as responsible IA for the project recruited a Supervision Consultant (SC). The national and international team of consultants assist UWSCG as project supervision for the construction of sub- projects under the USIIP. The SC also provides capacity building training to contractor staff for management and operation and maintenance for the Projects. The SC assist UWSCG in assuring that the project is implemented according to the specified standards. SC assignment includes the supervising of the implementation of the environmental management plan
- All mitigation measures during construction have to be implemented by the contractor that will be monitored by the supervision consultant (SC). To ensure smooth Implementation of EMP of sub-projects, an Environmental Management Specialist (EMS) is employed by the SC. SC/EMS conducts routine observations and surveys, prepares quarterly environmental reports and submits to UWSCG
- The Contractor has the following obligations:
 - to employ Environmental Consultant responsible for developing and implementing the construction phase EMP and for provision of corresponding information to UWSCG and SC;
 - to prepare SEMP;
 - to develop, if required, a Spoil Disposal Plan and Construction Waste Disposal Plan agreed with the MoENRP and Local Government;
- ADB is the donor financing the Investment Program.

- DC is responsible for incorporation of mitigation measures in design and construction
- The environmental specialist (ES) is hired by UWSCG under the USIIP to assist and advise the Division of Resettlement and Environmental Protection (DREP) of UWSCG 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 safeguard compliance. ES supports DREP in EARF implementation, in particular, reviewing IEE/EIA Reports and overseeing implementation of EMP/SEMPs. In training and capacity building activities. The ES prepares bi-annual reports and submits to ADB
- DREP is responsible for Implementation of mitigation and monitoring measures during construction and operation of sub-projects under USIIP. Currently DREP is staffed with a Head of Division, who is responsible for both resettlement and environmental issues, and Senior Environmental Specialist (SES).

14. Environmental management organization is shown in Figure 1 and Figure 2.

(ii) Structure Diagrams of the Project's Environmental Management System

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

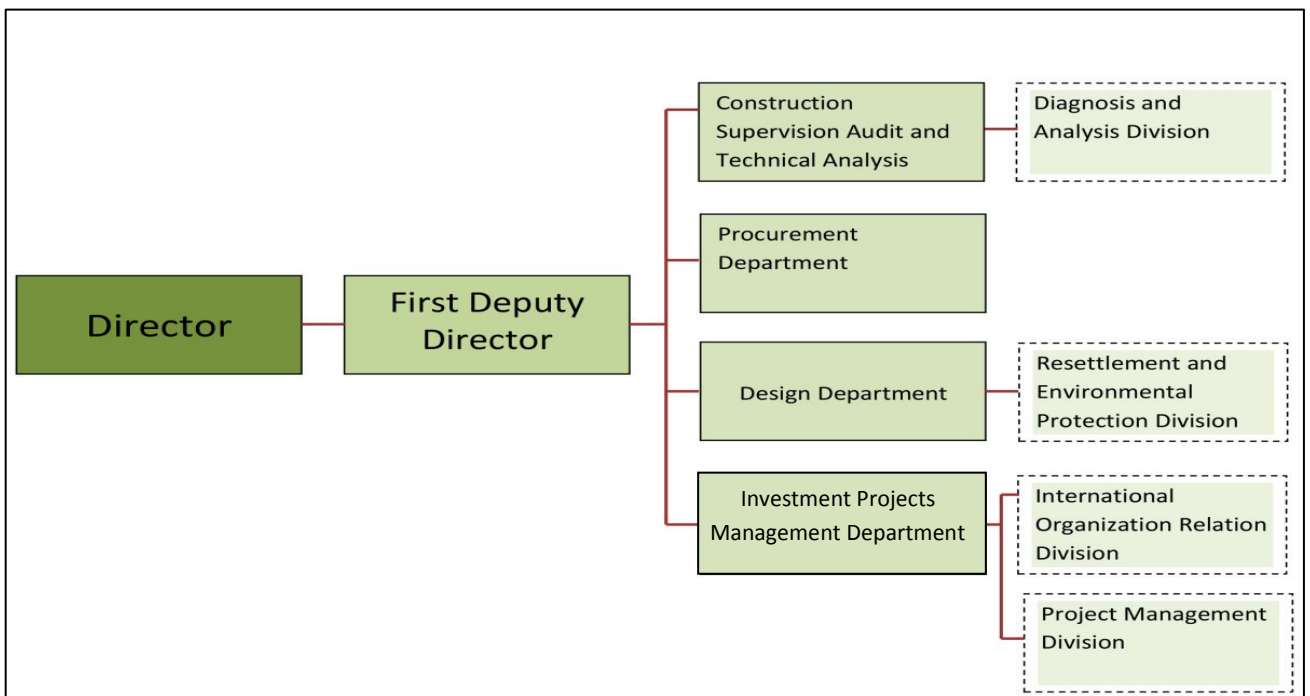
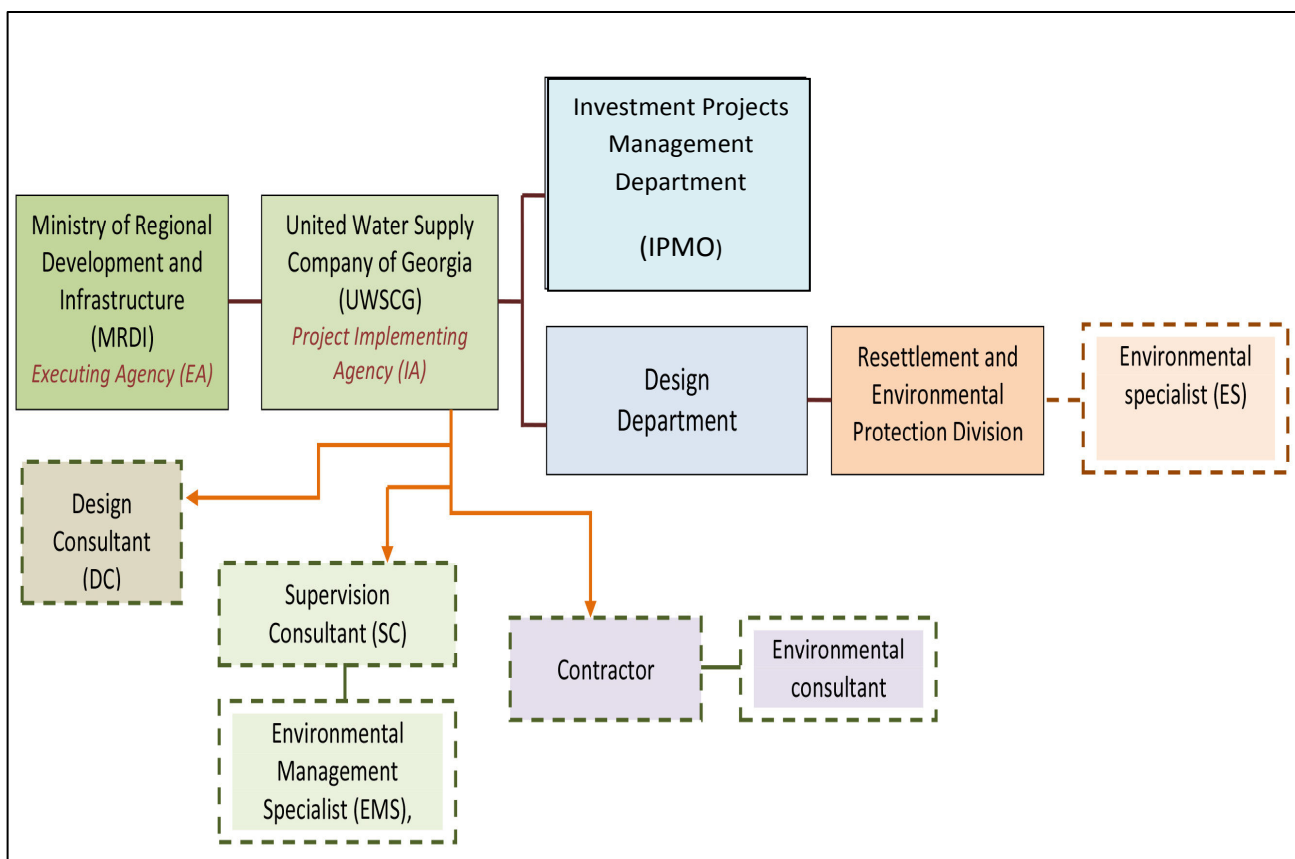


Figure 2. Structure Diagram of the Agencies Involved in Investment Program Implementation



C. Awareness and trainings

(a) On-site trainings in Kutaisi, Poti and Zugdidi/Service Centers

15. As described in details below, the GRM system was established under the Reg-01 project to provide an accessible, rapid, and effective response to affected population. In order to strengthening local UWSCG capacity to receive and address concerns about the impact of sub-projects during the construction phase one day on-site trainings were conducted by SC/EMS and ES of USIIP in three investment cities of Kutaisi, Poti and Zugdidi.
16. The staff of local UWSCG offices identified in advance by the UWSCG who would be responsible for filling the complaint registration forms and further processing the complaints have been introduced to the GRM system, in particular how to fill in complaints log (ADB template), what complaints should be handled through GRM, how to proceed further, and how complainants can address responsible authorities.

(b) Public Awareness Activities:

17. **REG-01 project:** During the construction process of project Reg-01 and particularly for Kutaisi water network construction works, Eptisa and UWSCG have indeed recognized that there was a continued need for community interaction, sensitization and awareness creation to also acquaint the communities in the target Areas with the benefits of a fully pressurized water supply network and that any water consumption will be metered and charged. Awareness creation also relates to environmental and hygienic use of water by the customers. Similarly awareness is needed to enhance willingness by new customers to connect to the new or rehabilitated networks and to pay for the services. Detailed coordination with the NGO responsible for awareness raising, with the GRC for grievance redress and with other parties (e.g. Municipality, Media, local NGOs and community leaders) is required to bring about the change in attitude and orientation.
18. A public awareness strategy for Kutaisi water supply project was created based on the meetings and interviews with all relevant stakeholders and implementing entities. The major goal of the strategy is to increase the public awareness on project activities as well as keep the beneficiaries, especially those directly affected, informed and consulted on the results and benefits of the project implementation. The strategy document outlines main messages, communication channels and activities that should be implemented during the PA campaign. Based on the PA strategy a ToR was created for the local NGO to implement the PA activities in Kutaisi. The local NGO "Hera" is selected to start implementation of the PA activities set force by the PA strategy.
19. Before the selection of the local NGO, environmental and public awareness specialists of Eptisa and UWDCG are visiting the rehabilitation works, meeting the population and disseminating relevant information. Special letters with the information about the project, and GRM mechanism was created and distributed to the affected households where the rehabilitation works are in progress. More than 500 households have received the above mentioned letters which also includes information about the commission which will discuss their complaints in case such arise. In addition the UWSCG Kutaisi office PR specialist distributes the information about the rehabilitation works via news agencies and other means of communications to warn the population about any hindrances the local population might experience during the rehabilitation works. An active PA campaign is expected to start in Kutaisi in July 2014.
20. During the reporting period a meeting was held in Poti with the affected households living close to the rehabilitation sites. As per the request from the local population

their houses were examined before the commence of rehabilitation works. The agreements were signed with the affected households after the official examination of their properties.

21. The intensive Public Awareness campaign was carried out in Anaklia, the major goal of which was to raise local population's awareness on the project. PA and environmental team of Eptisa and UWSCG continued providing consultations to the households after the local population started the water consumption from the new water supply system. Numerous inquiries were received and answered or directed to the relevant institution. The local population was very actively using the hot-line previously set up within the framework of the PA campaign for Anaklia and Ganmukhuri water supply project. Mainly the hot-line was used to receive information about the solutions of technical problems like cleaning of the filters and others.
22. In May the customer satisfaction survey was carried out in Anaklia and Ganmukhuri to find out how well the customers were informed about the project, how satisfied they were with the new water supply network and the PA campaign carried out during the construction process. Total of 100 households (60 in Anaklia and 40 in Ganmukhuri) were surveyed according the special questioners. 60% of the customers were female and 40% male.
23. **MES-02 project:** During the reporting period Public Awareness specialists of SC/Eptisa conducted a survey in Mestia to find out how well the population was informed about the project and what were the main topics that they were interested to receive more information on and through which communication channels.
24. 40 households were interviewed in Mestia based on which the main topics and communication channels for the Mestia water supply and sanitation project PA campaign were identified. Based on the results of the survey the text of the brochure was created. The brochure will be printed and distributed to the local population in July by PA and Environmental team of SC and UWSCG in parallel with the public consultation meetings with the population. As there are no media outlets in Mestia the main communication channels will include door to door campaign and public consultation meetings.

D. Grievance redresses mechanism (GRM)

25. A GRM was established for REG-01 project and is operational since April 2014. The system operates on a 3-stage:
 - On the first stage complaints are discussed within two weeks of reception by the local service center of the UWSCG Kutaisi office, based on shareholders

verbal or written complain. On the first stage of grievance authorized representative of local service center is responsible to get known with claim idea, ensure claim registration etc.

- On the second stage of grievance if the problem is not solved within two weeks, shareholder has right to apply to the committee which will make decision within two weeks after the registration of the form. The GR Committee is staffed the following way:

- Representative of self-government – the head of committee;
- Director/ Manager of United Water Supply Company of Georgia Service Center;
- Investments Project Managementt Division representative of the company;
- Representative of local authoritative NGO (according to the claim reference);
- Shareholders' female representative;
- Shareholders' informal representative;
- Heads of local municipalities

- On the third stage of grievance by committee if the problem is not solved, shareholder can apply to ADB at a given address. So far about 25 complains have been registered and solved through amicable discussion (first stage). However a number of cases needed further investigations as cases related to unanticipated impact or significant incident during trench excavation works that occur at a transmission pipeline site in Kutaisi. This incident, which induce damages to several properties was first notified to the Client and Contractor by EPTISA in May 2014 and since then several resettlement activities have taken place namely the screening / registration of complains from Affected Persons, the auditing of losses and possible relocation of AP during rehabilitation works and the definition of the works and measures based on extensive geotechnical and structural works prepared by EPTISA. A short term Resettlement Action Plan is under preparation and its implementation is expected to take place in Aug. 2014.

26. During the construction activities and laying water pipe in V. Chabukiani Street in May 2014 Construction Company COBRA and all the parties were faced the resettlement problems due to landslides caused by excavation works. Earth movement resulted in foundations of two properties to be exposed. Screening of affected persons of both properties were carried out jointly by UWSCG and EPTISA, and technical studies carried out to propose solutions for rehabilitation works. Additional some other occupants

along the same transmission pipeline route were identified at risks (for property collapse) therefore relocation will be proposed under a short term resettlement plan to avoid any injury during future earth works. Status of Affected Persons for Kuataisi is presented in (Annex C).

II. ENVIRONMENTAL MONITORING

27. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of DREP on a regular basis, during the period January-June 2014. Monitoring sheets (MITIGATION COMPLIANCE & INSPECTION MONITORING FORMs submitted by ADB) were filled in on monthly bases. Unscheduled monitoring visits were carried out and non-compliance notes has been issued to the contractor as needed. Mitigated measures to reduce major environmental impacts have been instructed to contractors during the monitoring visits.
28. The monitoring activities included:
 - The monitoring of compliance of construction activities under Mes-01 project sites to the EMP requirements;
 - The monitoring of compliance of construction activities under REG-01 project sites to the overall project EMP and to individual SEMP's requirements;
 - Environmental monitoring of noise, vibration, air quality under the Reg-01 project;
 - Removal of vegetation
29. To carry out EHS monitoring on a regular bases contractor hired an Environmental Monitoring Specialist under the Reg-01 project. EMS of contractor conducted the day-to-day monitoring of the construction sites, developed the weekly monitoring reports and submitted to Eptisa.

30. Environmental Monitoring Specialist of SC/Eptisa develops quarterly monitoring reports for UWSCG/DREP based on the weekly reports submitted by Contractor and on environmental site inspection.
31. ES of DREP performs monitoring of contractor's performance with the approved EMPs and SEMP, environmental Standards and other environmental commitment of the contractor. ES develops bi-annual environmental reports and submits to ADB based on the quarterly reports prepared by SC and monitoring results.

A. Baseline Data

KUTAISI, POTI & ANAKLIA Water Supply Infrastructures (Contract REG-01).

32. Within the reporting period, in order to develop baseline data under the REG-01 project, Contract is signed between the Contractor and the National Environmental Agency (NEA).
33. The parameters measured for the baseline data at the construction sites are as follows: dust, carbon monoxide, nitrogen dioxide, sulfur dioxide and noise. The measurements were carried out at various construction sites (reservoirs, pumping stations, network) in Kutaisi, Anaklia and Poti. The frequency of measurements is defined to be quarterly based on agreement between contractor and the Agency.
34. The baseline measurements were carried out on 2 May, 2014. Location and data are included in the table below (Table 1). The next measurements will be conducted in mid July, monitoring results will be reflected in the next EMRs.

Table 2: Baseline Measurements (baseline data) under REG-01 project

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	Kutaisi, Vaja-Pshavela Str.52	N 42°16'18.7" EO 2°41'33.1"	0,007	0,92	0,002	<0,1	80,1
2	Kutaisi, Gorky Str.1	N 42°16'27.8" EO 42°41'47.7"	0,002	1,25	0,003	<0,1	50,1

3	Kutaisi, Chanchabadze str.93, Near pool	N 42°16'51.0" EO 42°41'33.1"	0,002	0,48	0,001	<0,1	42-85
4	Kutaisi, Rua str.1	N 42°16'53.7" EO 42°42'28.2"	0,001	0,41	0,001	<0,1	42-84
5	Kutaisi, Kiguli 4 th corner	N 42°16'30.7" EO 42°43'17.5"	0,001	1,07	0,001	<0,1	42,8
6	Kutaisi, Kldiashvili str.87	N 42°16'24.3" EO 42°43'24.8"	0,003	1,23	0,002	<0,1	43-72
7	Kutaisi, Solomon II str.8	N 42°15'52.6" EO 42°43'13.7"	0,004	1,28	0,003	<0,1	46-84
8	Kutaisi, Kupradze str.35	N 42°15'37.6" EO 42°42'54.0"	0,008	2,79	0,023	<0,1	44-76
9	Kutaisi, at the TV tower	N 42°16'48.8" EO 42°44'05.0"	0,000	0,72	0,002	<0,1	39,7
10	Kutaisi, Leselidze str. 2 nd corner	N 42°16'54.2" EO 42°43'02.1"	0,004	1,21	0,011	<0,1	45-82
11	Anaklia, near reservoir	N 42°45'59.1" EO 42°40'49.8"	0,007	0,47	0,002	<0,1	40,1
12	Anaklia, road, vil. Darcheli	N 42°26'18.3" EO 42°41'22.7"	0,009	0,89	0,005	<0,1	49-76
13	Poti, territory near water Supply	N 42°10'06.8" EO 42°40'19.8"	0,011	5,47	0,123	<0,1	96
14	Poti, vil.Khorga	N 42°13'54.6" EO 42°47'50.0"	0,003	1,28	0,005	<0,1	48-74
15	Poti, vil. Nosiri, near water supply	N 42°16'14.6" EO 42°04'26.3"	0,001	0,48	0,001	<0,1	57,1

B. Removal of vegetation/trees for construction

35. In order to carry out ecological assessment of the territory where the reconstruction of Tetramitsa reservoir (REG-01, Kutaisi) will take place biodiversity survey has been carried out by the independent consultant.

36. On the bases of recommendations provided in biodiversity survey cutting of the Red Book Lists: - Imeretian Oak and Zelkova trees will be minimized by changing a layout plan/alignment of the project; however, 5 red book trees will be removed during the construction. All other construction and preparatory works (material storage) will be conducted on lands where there is no vegetation.
37. Prior to construction, all Red List trees were marked with warning tape and fenced where necessary in order to ensure their preservation.
38. In parallel, according to the national regulations UWSCG has obtained a permit from the MoENRP for cutting 5 Red Book - Oak Trees, on June 26, 2014 (Decree No.1147). The original Decree scanned version is attached (See Annex B).
39. Based on this letter in order to compensate the felled trees Contractor will develop Compensation Action Plan (with ratio calculated by appropriate government agency in suitable habitats available adjacent to the study area) in Coordination with the MoENRP.

III. ENVIRONMENTAL MANAGEMENT

A. Site Inspection and Audit

40. Regular site monitoring visits have been carried out during the reporting period by Eptisa and UWSCG for both Mes-01 and Reg-01 projects. 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 to the Environmental Consultant and the H&S manager of REG-01 project. Mitigation measures have then been discussed with the contractor on-site and detail instructions were delivered. 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 both Mes-01 and Reg-01 projects.
41. The contractors were always informed on the detected non-compliances and were demanded to improve the deadline set and send photos on improvements. Environmental team of Eptisa and UWSCG monitored the improvements during the next monitoring visits. An unimproved environmental issues were qualified as non-compliances and notices issued to contractor (Annex D).
42. 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 below (Table 3):

Table 3: Implementation Status of Recommended Mitigation Measures under Reg-01 and Mes-01 projects

Site: REG-01 - Anaklia/Darcheli ¹

Impact on Environment	Dates of Joint Site Visits, Eptisa, UWSCG/DREP					
	09.01.2014	31.01.2014	27.03.2014	10.04.2014	06.06.2014	30.06.2014
	Recommended Mitigation Measures/Status of Implementation					
Generation of surplus/waste soil	Recommended mitigations: Allocation of surplus/waste soil at the particular place of the construction site for further disposal/use	Completed				
Removal of vegetation	Recommended mitigations: Fencing of trees located at the construction site to avoid its damaging	Completed				
Pollution of roads by soil transported from the construction	Recommended mitigations: Provide cleaning	Initiated, but the parameters of the wheel washing platform doesn't	Completed			

¹ Deadline for Corrective Actions implementation given to Contractor is about 5-7 days. Resolution status of previous CA-s were monitored during next site visit and status of implementation is provided in the table

site and dust generation	wheels of trucks before they leave construction site and organize proper washing place, including tanks for washing water collection	follow the standards				
Safety of workers and public during construction period	Recommended mitigations: Ensure that all workers are provided with and use appropriate Personal Protective Equipment	Completed				
				Recommended mitigations: Provide adequate fencing of construction area from right side (a nut orchard) of construction site	Completed	
	Recommended mitigations: Provide warning and sign boards to restrict public entry into the construction area	Completed				

Waste Management	Recommended mitigations: Placement of Household and Hazardous Waste containers at the special dedicated places with relevant indication signs (for example "Household Waste" and "Hazardous Waste")	Completed				
	Recommended mitigations: Regularly cleaning of construction area	Completed	Completed	Partially completed	Completed	

Site: REG-01 – Poti/Nabada²

Impact on Environment	09.01.2014	31.01.2014	27.03.2014	10.04.2014	06.06.2014	30.06.2014
	Recommended Mitigation Measures/Status of Implementation					
Generation of surplus/waste soil	Recommended mitigations: Allocation of surplus/waste soil at the particular place of the construction site for further	Completed				

² Deadline for Corrective Actions implementation was about 7-15 days. Resolution status of previous CA-s were monitored during next site visit

	disposal/use					
Removal of vegetation	Fencing of trees located at the construction site to avoid its damaging	Completed				
Pollution of roads by soil transported from the construction site and dust generation	(i) Provide cleaning wheels of trucks before they leave construction site and organize proper washing place, including tanks for washing water collection	Completed partially, parameters of well washing concrete platform doesn't follow the standard	In progress	In progress	Completed	
	(ii) Use tarpaulins to cover loose material that is transported to and from the site by truck	Completed partially, all trucks are equipped with tarpaulins, but not always used to cover trucks. Tarpaulins are not used during transportation of wet construction materials	Completed partially,	Completed partially	Completed partially	Not completed Non-compliance notes issued (08.07.2014)
Safety of workers and public during construction period	Provide warning and sign boards to restrict public entry into the construction area (at all needed place)	Completed partially, sign boards are not always following the instructions and standards proposed by Env. monitoring	Completed partially	Completed partially	Completed partially	Completed partially

		team				
					Provide adequate fencing (with relevant height) of construction area from all side. From entrance, right hand side fencing is to be repaired so that fence is not transparent	Completed partially, not following the instructions given during site monitoring by environmental team of ADB, Eptisa, UWSCG
	Ensure that all workers are provided with and use appropriate Personal Protective Equipment - helmets, hand gloves, boots, masks etc.	Completed				
	The standard fixing should be used for warning signs or safety tapes. Enough warning signs should be installed at the	Completed partially, not always used standard fixing for warning signs.	Completed partially	Completed partially	Completed partially	Completed

	construction site					
			For the safety reasons water should be pumped out from the tranches immediately as soon as water allocation is visible in the excavation tranches	Completed		
	At the construction area provide adequate lighting to avoid accidents	Completed				
Waste Management	(i) Placement of Household and Hazardous Waste containers at the special dedicated place with relevant indication signs (for example "Household Waste" "Hazardous Waste")	In progress, Special place for Household and Hazardous waste containers allocated, no proper signs installed	Completed			
	Regularly cleaning of construction area	Completed partially	Completed partially	Completed partially	Completed partially	Completed

Site: REG-01 – Kutaisi/Vazha Phshavela³

Impact on Environment	09.01.2014	31.01.2014	27.03.2014	10.04.2014	06.06.2014	30.06.2014
	Recommended Mitigation Measures/Status of Implementation					
Generation of surplus/waste soil	Recommended Mitigations: Allocation of surplus/waste soil at the particular place of the construction site for further disposal/use	Completed				
Removal of vegetation	Fencing of trees located at the construction site to avoid its damaging	Not completed	Not completed	Not completed	Not completed Non-compliance notes issued (06.06.2014)	Completed
	Removed vegetation (bushes, branches and similar) should be taken out from construction area	Not completed	Not-completed	Not completed	Not Completed Non-compliance notes issued (06.06.2014)	Completed
Pollution of roads by soil transported from the construction site and dust	(i) Use tarpaulins to cover loose material that is transported to and from the site by truck	Completed partially, all tracks have tarpaulins, but sometimes when trucks transporting wet contraction materials tarpaulins	Completed partially	Completed partially	Completed partially	

³ Deadline for Corrective Actions implementation was about 7-15 days. Resolution status of previous CA-s were monitored during next site visit

generation		were not used				
		Recommended Mitigations: (ii) Provide cleaning wheels of trucks before they leave construction site and organize proper washing place with concrete flooring, including tanks for washing water collection	Completed partially, not arranged with standard parameters	Completed partially, not arranged with standard parameters	Completed	
Safety of workers and public during construction period	(i) Provide adequate fencing of construction area from all sides to avoid entrance of people or animals to the site	Completed partially, fencing from the school side should follow the recommended standards	Completed			
	(ii) Ensure that all workers are provided with and use appropriate Personal Protective Equipment	Completed				

	(iii) Establish proper construction site entrance gate with relevant warning signs and locking equipment	Completed partially, not installed relevant standard warning signs and gate	Completed partially, not installed relevant standard warning signs	Completed		
	(iv) At the construction area provide adequate lighting to avoid accidents	Completed				
Waste Management	Placement of Household and Hazardous Waste containers at the special dedicated place with relevant indication signs	In progress	Special place for Household and Hazardous waste containers allocated	Completed		
	Regularly cleaning of construction area	In progress	In progress	Construction site should be organized properly according to given instructions and cleaned regularly	Completed	

Site: REG-01 – Kutaisi/Kldiashvili⁴

Impact on	09.01.2014	31.01.2014	27.03.2014	10.04.2014	06.06.2014	30.06.2014
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⁴ Deadline for Corrective Actions implementation was about 7-15 days. Resolution status of previous CA-s were monitored during next site visit

Environment	Recommended Mitigation Measures/Status of Implementation					
Removal of vegetation	Recommended Mitigations: Fencing of trees located at the construction site to avoid its damaging	Not-completed	Completed			
Safety of workers and public during construction period	(i) Ensure that all workers are provided with and use appropriate Personal Protective Equipment	Completed				
	(ii) The standard fixing should be used for warning signs or safety tapes.	Completed				
	(iii) At the construction area provide adequate lighting to avoid accidents	Completed				
Site organization and cleaning	Regularly cleaning of construction area	Completed partially	Completed partially	Completed partially	Completed	

Site: REG-01 – Kutaisi/Network⁵

⁵ Deadline for Corrective Actions implementation was about 7-15 days. Resolution status of previous CA-s were monitored during next site visit

Note: There is common Impact on Environment of construction networks in Kutaisi. Mitigation instructions given to contractor are basically the same for all streets and are presented in a table below.

Impact on Environment	09.01.2014	31.01.2014	27.03.2014	10.04.2014	06.06.2014	30.06.2014
	Recommended Mitigation Measures/Status of Implementation					
Generation of surplus/waste soil	Recommended mitigations: Allocation of surplus/waste soil at the particular place of the construction site for further disposal/use	Completed partially, in some places surplus soil was generated near the trenches, because some testing of pipes were taking place	Completed partially	Completed partially		Completed partially
Pollution of roads by soil transported from the construction site and dust generation		Recommended mitigations: Use tarpaulins to cover loose material that is transported to and from the site by truck	Despite of several verbal instructions given to contractor during the monitoring visits tarpaulins are always used for covering the trucks	Completed partially	Not-completed Non-compliance notes issued (06.06.2014)	Not-completed Non-compliance notes issued (08.07.2014)
Safety of workers and public during construction period	Recommended mitigations: (i) The wooden/metal walkways/planks should be installed across open trenches when	Completed partially, in some places walkways are not installed properly	Completed partially	Completed partially	Not completed Non-compliance notes issued (06.06.2014)	Not completed Non-compliance notes issued (08.07.2014)

	passing settlement area (at all needed place)					
	(ii) Provide standard warning and sign boards to restrict public entry into the construction area (at all needed place)	Completed partially, very poor warning signs are used by contractor	Completed partially	Recommended mitigations: Along to all tranches warning signs or safety tapes should be installed according to given standards and instructions The mobile relevant information signs should be installed	Not-completed Non-compliance notes issued (06.06.2014)	Not-completed Non-compliance notes issued (08.07.2014)
	Ensure that all workers are provided with and use appropriate Personal Protective Equipment	Completed Partially	Completed Partially	Completed Partially	Completed Partially Non-compliance notes issued (06.06.2014)	Completed partially in some places, for example, in Kldiashvili str. some workers were not equipped with proper protective equipments Non-compliance notes issued (08.07.2014)
	Immediate fill up of useless open tranches	Completed partially	Completed partially, sometimes tranches are open more than 24h.	Completed partially, sometimes tranches are open more than 24h.	Non-compliance notes issued (06.06.2014)	

	At the construction area provide adequate lighting to avoid accidents	Completed				

MES-01 Project

Impact on Environment	May 2015	June 6, 2014	July 30, 2014
Impacts caused by excavation and generation of waste soil	Recommended Mitigations: The surplus/waste soil pile should be stored separately for further use at the dedicated place Utilize surplus/waste soil for other construction activities or to raise the ground-level of low level sites	The majority of works is accomplished but still there are some places at the construction sites where reinstatement activities are not completed and some additional works has to be done by graders.	Completed

Disturbance to business, people, activities and socio-cultural resources due to construction work	<p>Recommended mitigations:</p> <p>All openly left trenches should be fenced properly with standard warning signs and safety tapes</p> <p>Provide wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required; Increasing workforce to complete the work in minimum time in the town.</p> <p>Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction</p>	Completed partially Contractor not always provided information to the local residents before the commencement of any construction activities.	Completed
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<p>Safety risk for local residents and workers</p>	<p>Recommended mitigations</p> <p>Exclude public from the site – enclose construction area, provide warning and sign boards, security personnel;</p> <p>Ensure that all workers are provided with and use safety paraphernalia – helmets, hand gloves, boots.</p>	<p>Completed</p>	
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B. Non-compliance Notice

REG-01

43. Corrective actions requested after the Monitoring of sites were mostly improved by contractor, however there were some Environmental issues that were not addressed adequately. During the course of the construction supervision in the previous six months of the works “non compliance Notice” was written by the EMSs of Eptisa and UWSCG to the contractor.
44. This particular “Non-compliance Notice” was issued because of continues non-compliance with instructions given during each monitoring visits. Namely network construction activities (**Kutaisi: network – Kldiashvili, Gelati, Kupradze, Erevani streets and Vazha Pshavela site**) in Kutaisi didn’t comply with EHS requirements.
45. The issued “non compliance notices” for both Reg-01 and Mes-01 projects are annexed to this report.

C. Corrective Action Plans

46. To resolve the observed issues, the regular Environmental Meetings have been initiated with participation of UWSCG/IPMO/DREP, Eptisa, Contractors. During the meetings environmental issues and implementation of the mitigation measures were discussed. Agreements were reached that contractor shall respond on the monitoring of the compliance carried out by SC and UWSCG. On-site inspection and monitoring of the mitigation measures were carried out jointly by Eptisa and UWSCG with the contractor to document progress of corrective actions being implemented.

Table 4: Actions taken for implementation of mitigation measures under REG-01 and MES-01 projects and status of improvements by the June 30, 2014.

REG-01

Construction Site	Environmental Issues	Action taken
Kutaisi/Vazha Phshavela	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	Completed
	Fencing of trees located at the construction site to avoid its damaging	Completed
	Use tarpaulins to cover loose material that is transported to and from the site by truck	Not Completed
	The standard and relevant warning signs should be installed at the entrance gate	Not Completed in accordance with given instructions by EPTISA and UWSCG

	Provide adequate lighting to avoid accidents	Completed
	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)	Completed
	Placement of Household Waste containers at the special dedicated place with relevant indication signs (for example "Household Waste")	Not Completed
	Placement of properly Hazardous Waste containers at the special dedicated places with relevant indication signs (for example "Hazardous Waste")	Not Completed
	Proper arrangement and cleaning of construction site	Completed partially
Kutaisi/Kldiashvili	Fencing of trees located at the construction site to avoid its damaging	Completed
	Use tarpaulins to cover loose material that is transported to and from the site by truck	Completed
	Ensure adequate fencing of construction area with relevant warning and information signs	Completed
	Provide adequate lighting to avoid accidents	
	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)	Completed
	Regularly cleaning of construction area	Completed partially
Kutaisi/ Network	The surplus/waste soil should be stored separately for further use at the dedicated place to avoid disturbance of the population, if trenches are left open more than 24 hours	Not Completed
	Use tarpaulins to cover loose material that is transported to and from the site by truck	Not completed
	Provide adequate lighting to avoid accidents	Completed
	Provide warning signs or safety tapes around to all open trenches	Partially completed not following the standards
	Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required	Partially completed
	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)	Completed partially
	Ensure proper compaction of refilled soil the material shall be refilled in layers and compacted properly layer by layer	Completed Partially not following instructions given by Eptisa and UWSCG

Poti/Nabada	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	Completed
	Fencing of trees located at the construction site to avoid its damaging (needs updating, have you already cut the trees (not red book) on the construction area, please update)	Completed
	Use tarpaulins to cover loose material that is transported to and from the site by truck	Not completed
	Organize proper place for washing of trucks wheels with concrete flooring Clean wheels and undercarriage of haul trucks prior to leaving construction site	Completed
	Ensure adequate fencing of construction area with relevant warning and information signs	Partially completed
	Provide adequate lighting to avoid accidents	Completed
	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)	Completed
	Placement of Household Waste containers at the special dedicated place with relevant indication signs (for example "Household Waste")	Completed
	Placement of properly Hazardous Waste containers at the special dedicated places with relevant indication signs (for example "Hazardous Waste")	Completed
	Proper fencing of construction area (not to be transparent) from the left side of the construction site	Not properly fenced
	Regularly cleaning of construction area	Completed partially
Anaklia/Darcheli	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	Completed
	Fencing of trees located at the construction site to avoid its damaging	Completed
	Organize proper place for washing of trucks wheels with concrete flooring Clean wheels and undercarriage of haul trucks prior to leaving construction site	Completed
	Ensure adequate fencing of construction area with relevant warning and information signs	Completed
	Provide adequate lighting to avoid accidents	Completed
	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)	Completed
	Proper fencing of construction site from the right side (nuts garden)	Completed
	Placement of Household Waste containers at the special dedicated place with relevant indication signs (for example "Household Waste")	Completed
	Placement of properly Hazardous Waste containers at the special dedicated places with relevant indication signs (for example "Hazardous Waste")	Completed
	Proper arrangement of construction site including internal access roads	Partially completed

	Regularly cleaning of construction area	Partially completed
Anaklia/Network	The surplus/waste soil pile should be stored separately for further use at the dedicated place	Not completed
	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)	Completed
	The relevant wooden/metalwalk ways/planks should be installed across open tranches when passing settlement area	Not completed
	The standard fixing should be used for warning signs or safety tapes. At the roads blinking signs should be installed if street central lightening is not operating	Not completed
	Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction	Not completed
	All openly left tranches should be fenced properly with standard warning signs and safety tapes	Not completed

MES-01

Construction Site	Environmental Issues	Action taken
Mes-01	Impacts caused by excavation and generation of waste soil	Not Completed
	Disturbance to business, people, activities and socio-cultural resources due to construction work	Not Completed
	Safety risk for local residents and workers	Not completed
	Refilling/compaction and reinstatement of site at the same condition as it was before construction	Completed

47. These issues were captured in project photos and shown in Annex 2. Non-compliance notes. Recommendations given to contractor to address issues is presented below (Table 5):

IV. CONCLUSIONS AND RECOMMENDATIONS

48. As presented in this report, tranche-1 of this Investment Program is being implemented in compliance with the ADB Safeguard Policy Statement, 2009, National Legislation and overall EARF.
49. Necessary instructions have been given to the Contractor by UWSCG and SC to follow the EMPs and SEMP for Reg-01 and Mes-01 projects.

Table 5: Recommendations to address Environmental Issues

Recommendations	Responsible Party
REG-01	
Kutaisi: Streets (Vaja-Pshavela, Kldiashvili, Gelati, others)	
The surplus/waste soil should be stored separately for further use at the dedicated place to avoid disturbance of the population, if trenches are left open more than 24 hours	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Relevant wooden/metal walkways/planks should be installed across open tranches when passing settlement area	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports
Cover trucks with tarpaulins and spraying water on the road to avoid dust generation	Contractor's Environmental Consultant to monitor progress and provide in weekly report
The standard fixing should be used for warning signs or safety tape	Contractor's Environmental Consultant to monitor progress and provide in weekly report
Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Kutaisi: Vaja-Pshavela Reservoir	
Household and Hazardous Waste container should have clear sticker mentioned "Household Waste" and "Hazardous waste"	Contractor, Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
"Household Waste" regularly collected by the waste collection service	Contractor, Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
The standard and relevant warning signs should be installed at the entrance gate	Contractor, Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Poti: Nabada Site	
Household Waste container should have clear sticker mentioned "HouseholdWaste" and regularly collected by the waste collection service	Contractor, Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Hazardous Waste containers should be installed in proper place	Contractor, Contractor's Environmental

	Consultant to monitor progress and provide weekly reports to Eptisa
Proper fencing of site (left side) with relevant material, not to be visible from outside	Contractor to perform physical interventions;; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Organize site with proper fencing of the unused construction materials of UWSCG's	Contractor; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Anaklia: Networks	
The surplus/waste soil pile should be stored separately for further use at the dedicated place	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
The relevant wooden/metalwalk ways/planks should be installed across open tranches when passing settlement area	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
The standard fixing should be used for warning signs or safety tapes. At the roads blinking signs should be installed if street central lightening is not operating	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
All openly left tranches should be fenced properly with standard warning signs and safety tapes	Contractor to perform physical interventions; Contractor's Environmental Consultant to monitor progress and provide weekly reports to Eptisa
MES-01 Project	
The surplus/waste soil pile should be stored separately for further use at the dedicated place	Contractor to perform physical interventions; Site engineer to perform weekly monitoring
The relevant wooden/metalwalk ways/planks should be installed across open tranches when passing settlement area	Contractor to perform physical interventions; Site engineer to perform weekly monitoring
All openly left tranches should be fenced properly with standard warning signs and safety tapes	Contractor to perform physical interventions; Site engineer to perform weekly monitoring

Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction	Contractor to perform physical interventions; Site engineer to perform weekly monitoring
Ensure that all workers are provided with and use safety paraphernalia – helmets, hand gloves, boots, masks	Contractor to perform physical interventions; Site engineer to perform weekly monitoring

V. ACTION PLAN FOR THE NEXT PERIOD

50. Carry out public awareness campaign in July 2014 under contract MES-01 by SC and UWSCG.

51. Contractor to finalize SEMP's under Reg-01 project, as per following schedule:

Tetramista reservoir	July 2014
TV Tower reservoir	July 2014

SC to endorse SEMP's by the mid of August. UWSCG to approve by the 20th of August and send to ADB.

52. Conduct monitoring of environmental quality at each construction site with particular reference to dust and noise. The specific plan for measurement is as follows:

Parameters	Quarterly measurement
dust	September 2014
vibration	September 2014
carbon monoxide	September 2014
nitrogen dioxide	September 2014
sulfur dioxide	September 2014
noise	September 2014

53. Finalize Post construction audit by the independent environmental Audit for Mes-01 project and audit results reflect in the next EMRs (end of August).
54. Actions to be implemented during the next 6 months period (July-December 2014) due to the landslide caused by the pipe works in Kutaisi Transmission Pipeline: Propose solutions based on the technical study (geotechnical investigation and structural design) carried out by Eptisa, UWSCG; Evaluate property of affected persons by the 10th of August (UWSCG/DREP); Develop Resettlement Action Plan and propose relocation for APs by the 10th of August; Implement rehabilitation works and measures upon validation of the rehabilitation budget. Status of Implementation of the Resettlement Action Plan will be reflected in the next EMRs.

ANNEX A: PROJECT PHOTOS

Kutaisi/Vazha Pshavela

Environmental Issues



Environmental Issues Mitigated







Kutaisi/Kldiashvili





Kutaisi/Network









Poti/Nabada







Anaklia/Darcheli, Anaklia/Network



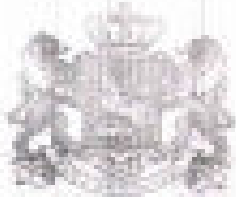


Mestia





ANNEX B: PERMIT FROM THE MoENRP



**საქართველოს მთავრობის
განკარგულება**

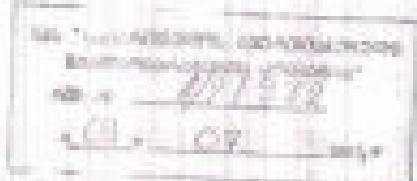
№1147 2014 წელს 20 ივნისი ქ.თბილისი

**შპს „საქართველოს გაერთიანებული წყალმომარაგების კომპანიათათვის“
გადამწერების საფრთხის წინაშე მყოფი ევლური მეტწარგების ზეწებრივი
გარემოდან ამოღებაზე თანხმობის მოვლის შესახებ**

1. საქართველოს „წითელი წყლისა“ და „წითელი წყლის“ შესახებ“
საქართველოს კანონის 24-ე მუხლის პირველი პუნქტის ა) ქვეპუნქტისა
და 27 პუნქტის შესაბამისად, ქ. თბილისის წყალმომარაგების სისტემის
სარეაბილიტაციო სამუშაოების განხორციელების მიზნით, შპს
„საქართველოს გაერთიანებული წყალმომარაგების კომპანია“ მიეცეს
უფლება, ზეწებრივი გარემოდან ამოღოს სამშენებლო სამუშაოების
წარმოების ტერიტორიაზე არსებული, საქართველოს „წითელი წყლისა“
შეტანული, გადამწერების საფრთხის წინაშე მყოფი ევლური მეტწარგ
იმერული მუქას (ჭიჭილა მთიანეთის რაიონის ტერიტორიაზე) ინდოვადი.

2. შპს „საქართველოს გაერთიანებული წყალმომარაგების კომპანია“
გადამწერდება:

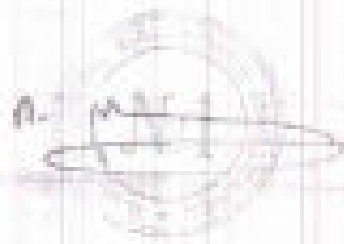
ა) ამ განკარგულების პირველი პუნქტის შესაბამისად, ზეწებრივი
გარემოდან ამოღებული მუქის რაოდენობა, განკარგვის მიზნით,
გადამწერს საკუთარ საპროექტო ტერ-ფულზე პირა - საქართველოს ფინანსთა
სამინისტროს მანქანა-ტრელების საფუძველზე.



ბ) განმარტულების ძალაში შესვლამდე არც ერთი უადამიო სატრადულო გარეშობა და ბუნებრივი რესურსების ფაქტის სამინისტროს შესაბამისობაზე წარუდგინოს განმარტების საფუძვლის წინაშე მყოფი ყველური მეტარების ბუნებრივი გარეშობიდან ამოღებით ბიომრავალფეროვნებისათვის შეფერბული წილის საკომპენსაციო ქრეფების პაკეტი.

3. ამ განმარტულის პირველი ბუნებრივი გამოვლინების უადამიოების საფუძვლის წინაშე მყოფი ყველური მეტარების ბუნებრივი გარეშობიდან ამოღებაზე კონტროლი განმარტულის სატრადულო გარეშობა და ბუნებრივი რესურსების ფაქტის სამინისტროს სატრადულო სამმართველო დატრადულები - განმარტულის შესამრადულოების დგარტამტრადულები.

პრემიერ-მინისტრი



ორველი დარბაზი

Results of Measurements

Contract with LTD „Cobra Georgia“ №3/245 02.05.14.

Annex

№	Place of measurements	Coordinates	Results				
			Dust mg/m ³	CO mg/m ³	NO ₂ mg/m ³	SO ₂ mg/m ³	Noise db
1	2	3	4	5	6	7	8
1	Qutaisi, Vaja-Pshavela str. 52	N 42°16'18,7" EO42°41'33,1"	0,007	0,92	0,002	< 0,1	80,1
2	Qutaisi, Gorky str. 1	N 42°16'27,8" EO42°41'47,7"	0,002	1,25	0,003	< 0,1	50,1
3	Qutaisi, Chanchabade str. 93, Near pool	N 42°16'51,0" EO42°41'33,1"	0,002	0,48	0,001	< 0,1	42 - 85
4	Qutaisi, Rua str. 1	N 42°16'53,7" EO42°42'28,2"	0,001	0,41	0,001	< 0,1	42 - 84
5	Qutaisi, Kiguli 4th corner.	N 42°16'30,7" EO42°43'17,5"	0,001	1,07	0,001	< 0,1	42,8
6	Qutaisi, Kldishvili str. 87	N 42°16'24,3" EO42°43'24,8"	0,003	1,23	0,002	< 0,1	43 - 72
7	Qutaisi, Solomon II str. 8	N 42°15'52,6" EO42°43'13,7"	0,004	1,28	0,003	< 0,1	46 - 84
8	Qutaisi, Kupradze str. 35	N 42°15'37,6" EO42°42'54,0"	0,008	2,79	0,023	< 0,1	44 - 76
9	Qutaisi, at the TV tower	N 42°16'48,8" EO42°44'05,0"	0,000	0,72	0,002	< 0,1	39,7
10	Qutaisi, Leselidze str. 2nd corner.	N 42°16'54,2" EO42°43'02,1"	0,004	1,21	0,011	< 0,1	45 - 82

ANNEX C: BASELINE
MEASUREMENTS

1	2	3	4	5	6	7	8
11	Anaklia, near reservoir	N 42°25'59,1" EO42°40'49,8"	0,007	0,47	0,002	< 0,1	40,1
12	Anaklia, road, vil. Darcheli	N 42°26'18,3" EO42°41'22,7"	0,009	0,89	0,005	< 0,1	49 - 76
13	PhoTi, territory near water supply, at the nearest house	N 42°10'06,8" EO42°40'19,8"	0,011	5,47	0,123	< 0,1	96
14	PhoTi, vil. Khorga	N 42°13'54,6" EO42°47'50,0"	0,003	1,28	0,005	< 0,1	48 - 74
15	PhoTi, vil. Nosiri, near water supply	N 42°16'14,6" EO42°07'26,3"	0,001	0,48	0,001	< 0,1	57,1

Note: High level of noise (№ 3, 4, 6, 7, 8, 10, 12, 14) related to the traffic in the street.

National Environmental Agency

Department of Environmental Pollution Monitoring

Main Specialist

Sergo Khatsava

Main Specialist

Omar Kenia

Agreed: Head of Department

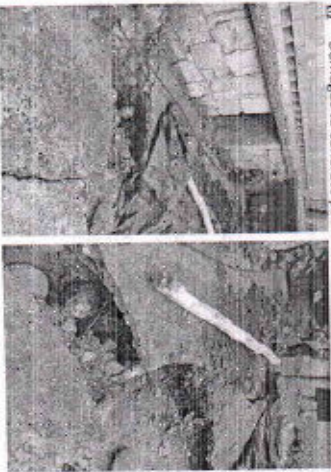
Marine Arabidze

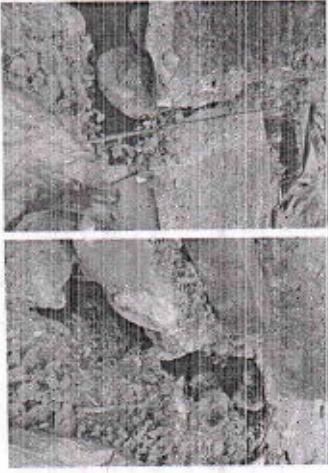
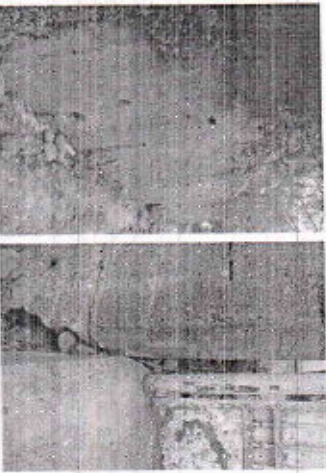
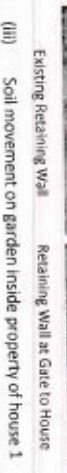



ANNEX D: STATUS OF EFFECTED PERSONS FOR KUTAI SI

REG-01 - Water Supply Infrastructures in Kutaisi, Poti and Anaklia

UNANTICIPATED IMPACT / SIGNIFICANT INCIDENT / ACCIDENT NOTICE No 1

Date / Location Of Incident	Description of Incident/Impact including Magnitude and Control Action taken at the time	Evaluation of Consequences	Corrective Action Required including Deadline, and Lessons Learned
<p>The junction of Kogushvili street with Tskaro street. 2 May, 2014</p>	<p>Sequence of incident</p> <p>COBRA commenced excavation for transmission line from junction of Onabukiani & Kogushvili Streets along Tskaro street on Tuesday 29 April.</p> <p>On Wednesday 30 April problems occurred with the side of the trench starting to collapse (adjacent to the retaining wall at the property on the corner of Kogushvili & Tskaro Street - No. 9 Kogushvili Str.). EPTISA instructs COBRA to lay immediately the HDPE8, DCI pipes and backfill the trench to avoid any landslide.</p> <p>Works continued and on Friday (2 May) problems occurred at property No. 1 Tskaro Street, - earth movement which resulted in the foundation of one corner of the house being exposed. COBRA placed trench supports in the trench to enable pipe laying to continue and subsequently backfilled the trench at this location. Major problem seems the low compacting of sub base of existing earth road due to previous contractors but this is only assumption at this stage</p>	<p>Risks & consequences:</p> <ul style="list-style-type: none"> ➤ Risk of house collapse for affected person of House #1 in case further earth works or movement of traffic near retention wall or any other seismic movement. This will endanger live of the 2 occupants ➤ Risk of retention wall collapse at House #1 which may endanger pedestrian or vehicles <p>EPTISA's initial analysis of the causes of the impact:</p> <p>The damages due to pipeline excavation works by COBRA are not only related to earth works executed on 2nd May 2014.</p> <p>The 2 private houses #1 and 9 are located on the top side of an embankment sustained by a non-reinforced concrete wall which was in a very bad condition before COBRA started the works in that area. The wall was on an instable balance and taken down by structural steel profiles which were sustaining former landslides.</p> <p>The property located on house #9 of Kogushvili street shows old cracks and fissures treatment carried out before COBRA started working there which actually denote former movements in the embankment. These cracks are therefore not a result of the earth works carried out on 2nd May but on other causes that may both be related to the construction standard of the houses and retention walls (incl. foundation) and to earth works at the road side by other previous contractors and utilities</p> <p>Furthermore, the owners of this property #1 have</p>	<p>Corrective Action Plan proposed by EPTISA</p> <ol style="list-style-type: none"> 1. Grievance Redress Committee has registered the complains of 2 owners 2. Immediate evacuation of occupants. Short term resettlement plan is being prepared for both relocation of occupants and rehabilitation measures. Report is to be finalised by 25/5 3. Evaluation for compensation package (relocation) will be finalised by 20/7/14 4. Technical proposal and studies (geotechnical and structural) will be completed on 20/7/14 5. Implementation by COBRA of Rehabilitation works will take place as soon as RAP and budget is approved, and AP relocated (possibly in end July/early Au.)
	<p>(i) Damages to concrete path around foundation of House No.1</p>  <p>Affected Concrete Path, House #1 Concrete Path at Corner of House</p>		

	<p>built a two-floor warehouse with superficial foundation on the environs of the wall that transmits additional loads to it. Moreover, in the vicinity of this wall, a septic tank has been constructed and which discharges are probably done directly to the backfill sustained by the wall. It remains to be evaluated if a valid construction permit was delivered by the City Hall for such a two-floor building considering geotechnical and soil conditions.</p>	
<p>Corner of House, left</p> <p>(ii) Dislocation of retention wall at House no 1</p> <p>Corner of House, right</p> 	<p>The retention wall seems also to have a scarce draining system and practically blocked. The movement of the wall was already anterior before earth works on road by COBRA, on 2nd May, however this was aggravated by the 2/5 excavation works. No heavy excavator was used during COBRA intervention.</p>	
<p>Existing Retaining Wall</p> <p>(iii) Soil movement on garden inside property of house 1</p> 	<p>At the bottom of the wall, it has been installed by others Contractors, in an unknown date, a steel pipe in a trench that has modified the instable balance of the sec. Through several landslides in the aforementioned trench during the works carried out in the current trench it has been tested the deficient compaction of the former trench, that has probably caused its collapse before the outset of Cobra's works.</p>	

			
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Garden between House and Retaining Wall 1

Jointly Signed by:

Representative of the Construction Supervision Engineer: Antony Reid / Pascal Jansen

Date: 6/5/2014

Representative of the Contractor: Mario Carillo / J. Mariano Martin de Vidales

Date: 6/5/2014

Map Location with position of affected properties

ANNEX E: NON-COMPLIANCE NOTES (08.07.2014)



Urban Services Improvement Investment Project -
Georgia

Date: 8/07/2014

Page 1 of 2

Non Compliance Notice

Project: USIIP	Non-compliance Notice REG-01 Kutaisi, Poti, Anaklia
Contract No : REG-01	
Contractor : COBRA	
Reference : Kutaisi : network – Kldiashvili, Gelati, Kupradze, Erevani streets and Vazha Pshavela site	
Monitoring of REG -01 project was conducted by Irakli Legashvili (Eptisa), Badri Tsatava (UWSCG/DREP), Ketevan Chomakhidze Environmental Specialist of USIIP (UWSCG)	
This notice is to advice you, the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented urgently	
Non-Compliance at Vaja Pshavela Street	
To be improved immediately	
<ul style="list-style-type: none"> – The surplus/waste soil should be stored separately for further use at the dedicated place to avoid disturbance of the population, if trenches are left open more than 24 hours – Installed walkways by Cobra not corresponding the standards and instructions given to Cobra by Environmental Specialists of Eptisa and UWSCG, therefore relevant wooden/metal walkways/planks should be installed across open tranches when passing settlement area – Cover trucks with tarpaulins and spraying water on the road to avoid dust generation 	
Non-Compliance at Vaja Pshavela reservoir site	
To be improved in 3-5 days	
<ul style="list-style-type: none"> – Household Waste container should have clear sticker mentioned "Household Waste" and regularly collected by the waste collection service – Hazardous Waste container should be installed in proper place – The standard and relevant warning signs should be installed on the entrance gate 	
Non-Compliance at Poti – Nabada site	
To be improved in 3-5 days	
<ul style="list-style-type: none"> – Household Waste container should have clear sticker mentioned "Household Waste" and regularly collected by the waste collection service – Hazardous Waste container should be installed in proper place – Proper fencing of left site with relevant material (several times instructed by ADB, Eptisa, UWSCG) site not to be visible 	
Non-Compliance at Anaklia networks	
To be improved immediately	
<ul style="list-style-type: none"> – The surplus/waste soil pile should be stored separately for further use at the dedicated place (at some places left more than week) 	

- The standard fixing should be used for warning signs or safety tapes. At the roads blinking signs should be installed if street central lightening is not operating.
- The relevant wooden/metal walkways/planks should be installed across open tranches when passing settlement area
- Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction
- All openly left tranches should be fenced properly with standard warning signs and safety tapes
- Ensure that all workers are provided with and use safety - helmets, hand gloves, boots, masks, safety belts (while working at heights etc);

ANNEX E: Non-Compliance Notes: 06.06.2014

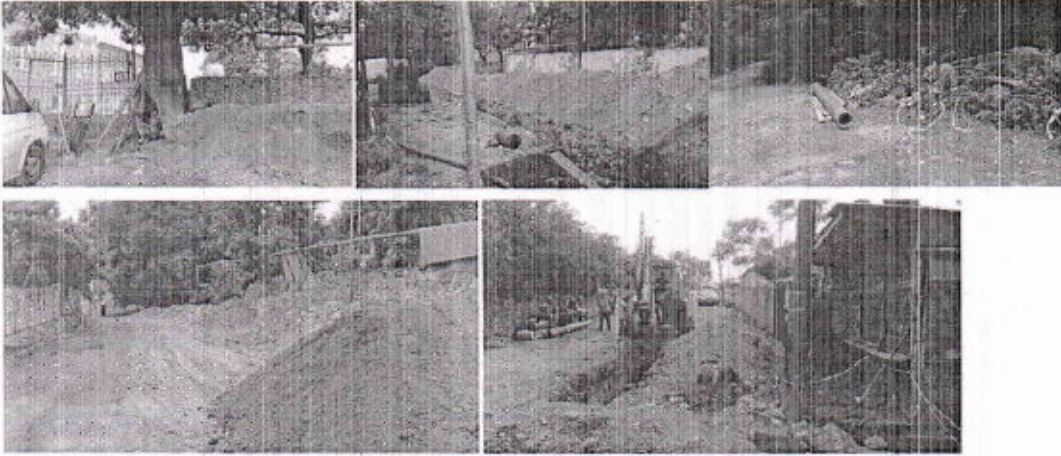


Urban Services Improvement Investment Project -
Georgia

Date:
06/06/2014

Page 1 of 3

Non Compliance Notice

Project: USIIP	Non-compliance Notice KUTAISI
Contract No: REG-01	
Contractor: COBRA	
Reference: Kutaisi: network – Kldiashvili, Gelati, Kupradze, Erevani streets and Vazha Pshavela site	
This notice is to advice you, the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented urgently	
Non-Compliance in Kutaisi	
Kldiashvili street :	
<ul style="list-style-type: none">– Trees located at the construction area should be fenced– The surplus/waste soil should be stored separately for further use at the dedicated place to avoid disturbance of the population, if trenches are left open more than 24 hours– All workers should wear complete PPE during operation– Construction area should be organized properly according to given instructions and cleaned regularly– The standard fixing should be used for warning signs or safety tapes. At the roads blinking signs should be installed	
	
Gelati street:	
<ul style="list-style-type: none">– The standard fixing should be used for warning signs or safety tapes. At the roads blinking signs should be installed if street central lightening is not operating– The relevant wooden/metal walkways/planks should be installed across open tranches when passing settlement area– Construction area should be organized properly according to given instructions and cleaned regularly	



Kupradze street :

- The surplus/waste soil pile should be stored separately for further use at the dedicated place
- Refilling/compaction and reinstatement process should bring site at the same condition as it was before construction



Erevani street

- All openly left trenches should be fenced properly with standard warning signs and safety tapes
- If street central lightening is not operating the openly left trenches should be lightened or blinking signs should be installed



Vazha Pshavela site:

- Trees located at the construction site should be fenced
- Should be arranged special place for fuel/oil spill response
- Household Waste container should have clear sticker mentioned "Household Waste" and regularly collected by the waste collection service
- Hazardous Waste container should be installed in proper place
- To avoid soil spreading to public roads from construction site it is necessary to apply truck wheels washing



These conditions have to be remedied within five (5) days by the prime Contractor (Cobra).

Transmitted to Contractor representative by:

Name RE	Time:
Signature:	Date:
Received by Contractor's representative	
Name:	Time:
Signature:	Date: