

# Environmental Monitoring Report

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Semestral Report  
July 2016

## GEO: Urban Services Improvement Investment Program – Project 1

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

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.

## BI-ANNUAL ENVIRONMENTAL MONITORING REPORT

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*Project Number: 43405-023*  
*January-June 2016*  
*Loan Number 2749-GEO (SF)*

### **GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 1) (FINANCED BY THE ASIAN DEVELOPMENT BANK)**

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July 2016

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## ABBREVIATIONS

<b>ADB</b>	Asian Development Bank
<b>DC</b>	Design Consultant
<b>UREP</b>	Unit of Resettlement and Environmental Protection
<b>EA</b>	Executing Agency
<b>EARF</b>	Environmental Assessment and Review Framework
<b>EHS</b>	Environmental Health & Safety
<b>EIA</b>	Environmental Impact Assessment
<b>EIP</b>	Environmental Impact Permit
<b>EMP/ SSEMP</b>	Environmental Management Plan/ Site-Specific Environmental Management Plan
<b>ES/ SES</b>	Environmental Specialist/ Senior Environmental Specialist
<b>GoG</b>	Government of Georgia
<b>GRC</b>	Grievance Redress Committee
<b>GRM</b>	Grievance Redress Mechanism
<b>USIIP</b>	Urban Sector Improvement Investment Program
<b>IA</b>	Implementing Agency
<b>IEE</b>	Initial Environmental Examination
<b>MFF</b>	Multi-tranche Financing Facility
<b>MoENRP</b>	Ministry of Environment and Natural Resources Protection
<b>MoRDI</b>	Ministry of Regional Development & Infrastructure
<b>NEA</b>	National Environmental Agency
<b>SC</b>	Supervision Consultant
<b>UWSCG</b>	United Water Supply Company of Georgia
<b>WSS</b>	Water Supply & Sewerage

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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 January-June 2016 time period.
- 1.2 **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.**
2. 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.
3. 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.
4. Tranche 1 of the Investment Program includes:
  - Construction of Mestia Headworks (MES-01)
  - Improvement of Water Supply Infrastructure in Anaklia, Kutaisi and Poti (REG-01)
  - Construction of Mestia Water Treatment Plant and Reservoirs (REG-02)
  - UWSCG Office Building
  - Construction of the Water Supply Network in Ureki (Ure-01).

#### **The following projects are financed under Tranche 1:**

5. **Mestia Water Supply Headworks (Contract MES-01).** The project comprises of the construction of a Tyrolean Weir as intake structure on Mestia Chala River for the capture of raw water. The discharge is estimated at minimum 1,000 liters/second in dry seasons. The location has been chosen for its altitude and the possibility to supply the water treatment plant, the adjoining reservoir and from there the largest part of the distribution network, by gravity. Apart from the intake, the scope of work comprises 10.75 km transmission lines to the site of Water Treatment Plant and a reservoir and the connection of this location to the distribution network.
6. The contract MES-01 was signed on 10 October 2011 with Joint Venture of Dagi LTD – Georgia and Enguri 2006 LTD – Georgia (which changed its corporate name to Enguri - New Construction LTD on 11 April 2013), and the 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 was issued by EPTISA in July 2014. Taking over of the facilities took place on 20 July 2014.

7. **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 35,000m<sup>3</sup>. The project also covers construction of 4 pumping stations (with total capacity of 4,516 m<sup>3</sup>/h) as well as construction of water treatment facility.
8. United Water Supply Company of Georgia under the Ministry of Regional Development and Infrastructure of Georgia signed a contract (#UWSCG/ICB/CW-2013-REG-01) with Spanish Cobra Instalaciones y Servicios. The Contract was made effective 19 September 2013.
9. **Tbilisi Office Building.** Detailed design for construction of a new head office of UWSCG was prepared and funded by GoG. IEE for office building completed and was submitted to ADB. In 02.08.2014 the baseline survey and biodiversity study of the project area was conducted. Public Hearing meeting was held on 2 July 2014.
10. 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 the 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.
11. United Water Supply Company of Georgia under the Ministry of Regional Development and Infrastructure of Georgia signed a contract (#CW/ICB/Office-01) with Georgian Construction Company DAGI Ltd on 1 December 2015. Date of commencement of civil works is December 29, 2015. The original completion date of the works is 21.06.2017
12. **MESTIA Water Supply Facilities (Contract REG-02).** The scope of works includes: a new water treatment plant (WTP); the rehabilitation of Tsrniashi spring catchment; a new reservoir at Lanchvali (1,000 m<sup>3</sup>); a new reservoir at Shgedi (1,000 m<sup>3</sup>); transmission pipes of approximately 9,200 meters.
13. 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 was signed with JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and ProtecnoSrl on 22 September 2014 and Notice-to-Proceed given on 08 December 2014.
14. **Construction of Water Supply and Wastewater Network in Ureki/Phase I (URE-01).** The project is simultaneously financed from Tranches I, II and III. The planned works under Tranche I included construction of Res-01 and Res-02 (2 x 3,000 m<sup>3</sup> and 1 x 1,200 m<sup>3</sup>) and one water supply pumping station (78m<sup>3</sup>/h and 676 m<sup>3</sup>/h), but currently location of Res-01 is changed. Final design and location is under consideration and will be finalized by the mid of January.
15. The Contract is signed with JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan) on October 28, 2014. Commencement date was November 24, 2014. Completion date is scheduled on November 22, 2017. The project is foreseen to serve 35,000 tourists and 5,400 local inhabitants by year 2040.

## B. Construction activities and project progress during the previous 6 months

### Construction Activities during previous 6 months under REG-01 project (January-June 2016)

**Table 1:** project progress during the previous 6 months

#### REG-01

REG-01 (KUT)		Kutaisi water distribution networks
<b>Sites</b>		Construction activities are completed by 100%
<b>Works undertaken during January-June 2016</b>		

REG-01 (KUT)		Kutaisi reservoirs & pump stations
<b>Site</b>		TV Tower Reservoir
<b>Works undertaken during January-June 2016</b>		No construction Activities have been carried out during the construction period. Construction activities are completed by 100%
<b>Site</b>		Tetramitsa reservoirs
<b>Works undertaken during January-June 2016</b>		92% of construction activities are completed
<b>Site</b>		VazhaPshavela reservoir & pumping station
<b>Works undertaken during January-June 2016</b>		No construction Activities have been carried out during the construction period. Construction activities are completed by 100%
<b>Site</b>		Kldiashvili reservoir & pumping station
<b>Works undertaken during January-June 2016</b>		No construction Activities have been carried out during the construction period. Construction activities are completed by 100%

#### URE-01

<b>Site</b>	<b>Water mains installation</b>
<b>Works undertaken during January-June 2016</b>	2.410 km of PE 100 pipes OD 710, SDR 11 installed – 16.5%
<b>Site</b>	<b>Water network</b>
<b>Works undertaken during January-June 2016</b>	1.933 km of HDPE pipes DN 25-560 – 4%
<b>Site</b>	<b>Sewerage network</b>
<b>Works undertaken during January-June 2016</b>	7.912 km of PE 100 and corrugated pipes OD 110-500 mm, SDR 11 installed – 13.7%

#### REG-02

<b>Site</b> WTP-Mestia	<b>Water mains installation</b>
<b>Works undertaken during January-</b>	WTP-Mestia 10.00%

<b>June 2016</b>	
<b>Site Transmission main, Works undertaken during January-June 2016</b>	DCI 250 mm executed 2900 m from 7120m 40.00%
<b>Site Skhede Reservoir</b>	1000 m3 5.00%
<b>Works undertaken during January-June 2016</b>	
<b>Site Lnachvali Reservoir, Works undertaken during January-June 2016</b>	1000m3 10.00%

### 1.3 Changes in Project Organization and Environmental Management Team

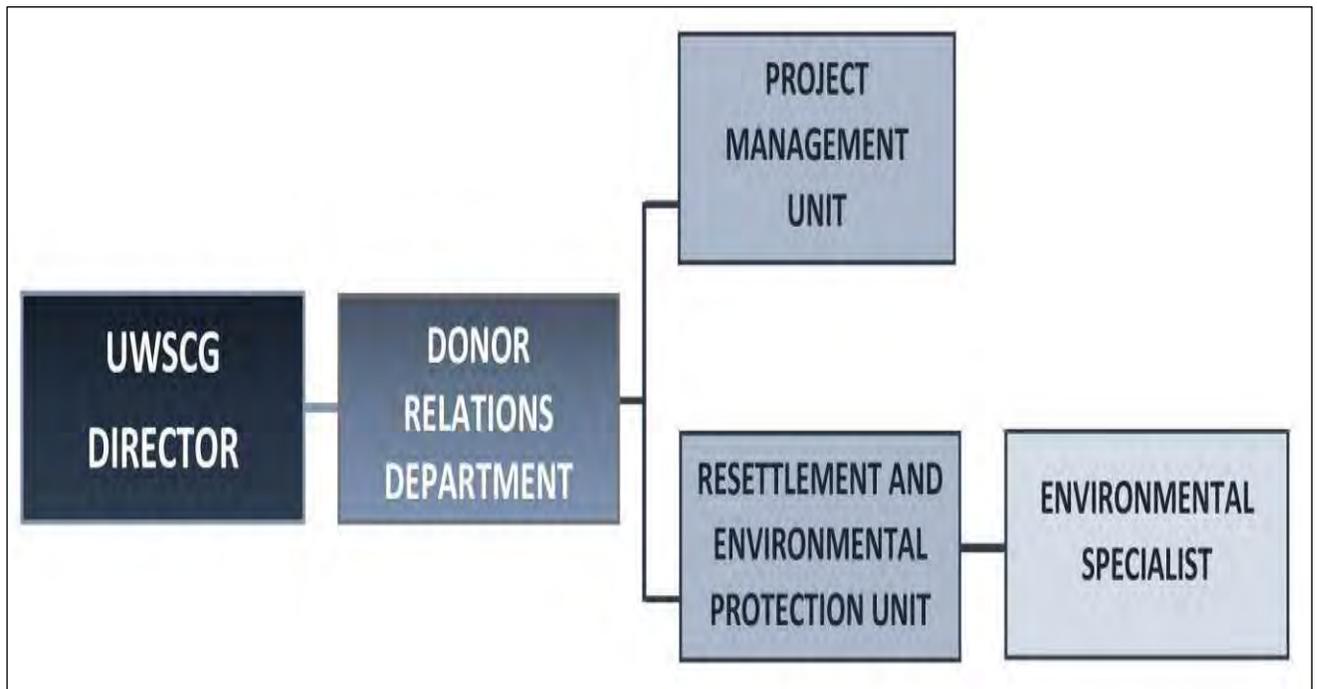
#### Agencies Involved in Investment Program Implementation

16. The following agencies are involved in implementing the Investment program: Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) responsible for management, coordination and execution of all activities funded under the loan. MoRDI has overall responsibility for compliance with loan covenants.
17. 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 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 2016 a new director Mr.Giorgi Koberidze was appointed in UWSCG.
18. 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.
19. 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.
20. The Contractor has the following obligations:
  - to prepare SSEMPs;

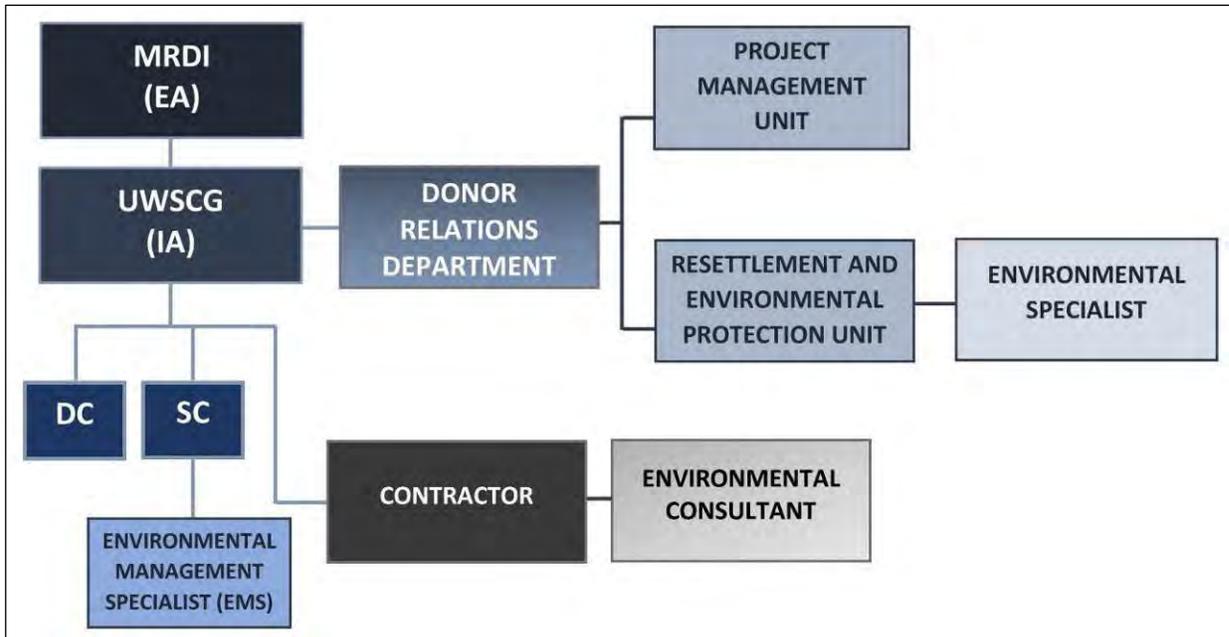
- to employ Environmental Consultant responsible for developing and implementing the construction phase SSEMPs and for providing the corresponding information to UWSCG and SC;
- to develop Solid Waste Disposal Plan and agreed the MoENRP and Local Government

21. DC is responsible for developing and incorporation of mitigation measures in design and construction.
22. The environmental specialist (ES) is hired by UWSCG under the USIIP to assist and advise the Resettlement and Environmental Protection Unit (UREP) 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.
23. 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 and one specialists, who is responsible for both resettlement and environmental issues.
24. 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**



### 1.3 Relationships with Contractors, Owner, Lender, etc

25. 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.
26. 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.
27. 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.
28. The team has constant communication with the Supervision Consultant, Contractor, reviews/ comments all environmental reports submitted by DC, SC and contractors.
29. In fact the SSEMPs has been approved by UWSCG/UREP after the numerous discussions with the contractor until the specific situations of the site as well as mitigation measures under the site specific management plans are reflected.
30. 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.

31. ADB oversees project sites regularly and gives clear instructions for the project sites improvements with regard to environmental safeguards.
32. 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.
33. A Grievance Redress Committee has been established within REG-01 in Kutaisi, Poti and Anaklia, to date all grievances have been dealt to the satisfaction of complainants.
34. Contractor of REG-01 package operated during the reporting period with the following sub-contractors:
  - Comremi Ltd
  - “New M”, Ltd
35. Below are the list of subcontractors of “Cobra” under the Reg-01 project
  - “Solid Waste Management Company of Georgia” – contract was signed for disposal of Municipal Waste from Kutaisi, Poti and Anaklia construction sites
  - “Solid Waste Management Company of Georgia” – contract was signed for disposal of Solid Waste from Kutaisi, Poti and Anaklia construction sites
36. Below are the list of subcontractors of PERI Ltd (Ure-01 project) for Disposal of Municipal Waste and extraction of minerals (gravel, ballast, etc)
  - Ureki Municipality - contract was signed for disposal of Municipal Waste from Ureki WWTP site to the Ureki landfill
  - License issued to Ltd Peri by the MoENRP for mineral extraction (gravel, ballast) on the basis of the purchase agreement signed between the Ltd “Peri” and Ltd “Anagi”.
37. Below are the list of subcontractors of “Ludwig Pfeiffer Hech und Tiefbau GmbH and Co” under the Reg-02 project
  - “Solid Waste Management Company of Georgia” – contract was signed for disposal of Solid Waste from Mestia Construction sites
38. 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.
39. Under the REG-01 project contractor has signed agreement with Ltd “Eco-Service” for the monitoring measurements (dust, CO, NO2, SO2, noise) of all construction sites.
40. Project organization for the awarded contracts listed above is given in the table 2 below.

**Table 2:** List of contracts under USIIP, Tranche 1

Contract #	Employer	Contractor
<b>Contract No UWSCG/ICB/CW/2011-MES-01</b>	UWSCG	Joint Venture of Dagi LTD - Georgia and Enguri 2006 LTD – Georgia (on April 2013 the name of Enguri 2006 LTD was changed to Enguri - New Construction LTD)
<b>Contract No: UWSCG/ICB/CW-2013-REG-01</b>	UWSCG	Cobra Instalaciones y Servicios SA (from Spain)

<b>Contract No: UWSCG/USSIP/ICB/CW/REG-02</b>	UWSCG	JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG (Germany) and Protechno Srl (Italy)
<b>Contract No: P43405-ICB-URE-01</b>	UWSCG	JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan)
<b>Contact No CW/ICB/Office-01</b>	UWSCG	Dagi LTD (Georgia)

## PART II - ENVIRONMENTAL MONITORING

41. 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 January-June, 2016. Monitoring sheets (Mitigation Compliance & Inspection Monitoring Forms submitted by ADB) were filled in on a monthly basis. Also unscheduled monitoring visits were carried out and non-compliance notes has been issued to the contractor as needed. Mitigation measures to reduce major environmental impacts have been instructed to contractors during the monitoring visits.
42. The monitoring activities included:
- The monitoring of compliance of construction activities under Reg-01 project sites to the EMP/SSEMP requirements;
  - The monitoring of compliance of construction activities under REG-02 project sites to the overall project EMP/SSEMP requirements;
  - The monitoring of compliance of construction activities under the Ure-01 project sites to the EMP/SSEMP requirements
43. Environmental Monitoring Specialist hired under the REG-01 subproject conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to Eptisa.
44. Environmental Monitoring Specialist hired under the URE-01 subproject conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to Eptisa.
45. 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.
46. 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.
47. The USIIP's Environmental Impact Monitoring and Mitigation is carried out in accordance with the updated EMPs and Site-Specific Environmental Management Plans (SSEMPs) prepared by the Contractors. The construction activities affecting the environment are as follows:
- Excavation works
  - Removal of soil
  - Removal of vegetation
  - Backfilling of trenches
  - Reinstatement activities

48. The following items are monitored during the implementation of the project for Reg-01, Ure-01 and Tbilisi Head Office:
- Air Quality
  - Noise
  - Vibration
  - Reinstatement of top soil
  - Removal of vegetation/trees for construction
49. According to the EMP/SSEMP requirements measurements of the dust, air quality and noise is done bi-annually.
50. 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.
51. No excavation works have been implemented for Tbilisi head office as yet. Only mobilization of the contractor is started.
52. No site inspection and monitoring have been carried out for Mestia Shkedi reservoir and WTP due to the weather condition. The monitoring of construction activities will be conducted in July 2016.

### **C. Monitoring Measurement Data**

#### **KUTAISI, POTI & ANAKLIA Water Supply Infrastructures (Contract REG-01):**

53. Environmental monitoring of dust, air condition, noise and vibration is performed as indicated in the relevant EMPs/SSEMPs (on the bi-annual basis).
54. The Environmental Measurements were carried out by the contractor at various locations of construction sites (reservoirs, pumping stations, network) in Kutaisi and Poti in June 2016. This sites include: a) Kutaisi, Tetramitsa Reservoir , Kutaisi, Vazha-Pshavela Str. 84, Kutaisi TV Tower and networks, Poti, territory near water Supply, Poti, vil.Khorga and Nosiri. The National Environmental Standard (Maximum Permissible Level) for Dust is 0,5 Mg/m<sup>3</sup>, for CO is 5,0 Mg/m<sup>3</sup>, for SO<sub>2</sub> – 0,5 Mg/m<sup>3</sup>., Noise level – 55dB (day time), 45dB (night time) is regulated by the Decree No. 297/N “On Approval of Environmental Quality Norms” (August 16, 2001 of the Ministry of Labor, Health and Social Affairs).
55. The frequency, time and place of the next monitoring measurements will be agreed between the Contractor, SC and UWSCG and will be indicated in the next July-December EMR of 2016. According to data received in June 2016 the obtained results did not exceed the National Environmental Standard (Maximum Permissible Level) of Dust, CO, NO<sub>2</sub>, SO<sub>2</sub> and Noise, The only exception is Kldiashvili Pumping Station, where the noise level is higher than the permissible level.
56. In order to determine the noise at Kldiashvili reservoir measurements were carried out at work site and the residential area, during the day time and night time. The relevant measurement data is provided in table 3 bellow.
57. Noise impacts should not exceed the levels presented in Table 3, in accordance with Decree No. 297/N “On Approval of Environmental Quality Norms” (August 16, 2001 of the Ministry of Labor,

Health and Social Affairs), or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site.

**Table 3: Noise Level Guidelines**

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

**Table 4: Monitoring measurements under REG-01 and Ure-01 projects and Tbilisi Head Office Reg-01**

N	Place of measurement	Coordinates	Results					Noise Db - at work site (industrial zone)	Noise Db - in the residential area (day time)
			Dusts Mg/m3	CO Mg/m3	NO2 Mg/m3	SO2 Mg/m3			
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	70	55	
1.	Kutaisi, Tetramitsa Reservoir	N4683582 E309673	0.028	0.23	0,001	<0,1	65	52	
2.	Kutaisi, Vazha-Pshavela Str. 84	N4682535 E309743	0.038	0.28	0.001	<0,1	49	45	
3.	Kutaisi, Rua Str. 1	N4683571 E310994	0.003	0.25	0.001	<0,1	52		
4.	Kutaisi, Kldiashvili Str. 104	N4682638 E312274	0.039	0.22	0.002	<0,1	75	56	
5.	Kutaisi, Solomon II, Str.7	N4681770 E311898	0.035	0.3	0,002	0,1	52	50	
6.	Kutaisi TV Tower	N4683429 E313492	0.049	0.25	0.002	<0.1	48	45	
7.	Poti, territory near water Supply	N4671946 E720628	0.041	0.69	0.025	<0,1	58	55	
8.	Poti, vil.Khorga	N4678430 E731259	0.098	0.18	0.015	<0,1	48	45	
9.	Poti, vil. Nosiri,	N4683018 E261548	0.13	0.55	0.02	<0,1	69		

58. The monitoring measurements were carried out by contractor/Peri in various construction sites on June 2016 (See Annex 1). Location and data are included in the table below. The next monitoring measurements will be conducted in September 2016 and results will be reflected in the next July-

December 2016 EMRs. According to data received in June 2016 the obtained results did not exceed the National Environmental Standard (Maximum Permissible Level) of Dust, CO, NO<sub>2</sub>, SO<sub>2</sub> and Noise, therefore no additional mitigations are required. All measurement were carried out at day time (15:00 – 17:00pm).

### Ure-01

Samplin place coordinates	Sample N	Noise DB	Concentration mg/m <sup>3</sup>					
			Saturated hydrocarbons	Carbon oxide CO	Nitrogen dioxide NO <sub>2</sub>	Dust	Sulfur dioxide SO <sub>2</sub>	Hydrogen sulfide H <sub>2</sub> S
Tsvermagala X 0730415 Y 4649265	1	40,1	0	0,11	<0,001	0,002	<0,1	<0,1
	2	41,3	0	0,22	<0,001	0,004	<0,1	<0,1
	3	41,2	0	0,22	<0,001	0,006	<0,1	<0,1
	4	39,7	0	0,08	<0,001	0,001	<0,1	<0,1
Ureki X 729069 Y 4652470	1	48,2	0	0,31	<0,001	0,032	<0,1	<0,1
	2	64,2	1	1,28	0,005	0,248	<0,1	<0,1
	3	63,7	1	1,29	0,007	0,201	<0,1	<0,1
	4	64,4	1	1,2	0,004	0,194	<0,1	<0,1
Ureki (Beside five-story building) X 730159 Y 4652634	1	47,3	0	0,12	0,001	0,003	<0,1	<0,1
	2	50,1	1	1,18	0,002	0,027	<0,1	<0,1
	3	58,0	1	1,29	0,008	0,021	<0,1	<0,1
	4	46,4	0	0,8	0,001	0,02	<0,1	<0,1
Natanebi X 730195 Y 4648085	1	48,6	0	0,22	0,001	0,007	<0,1	<0,1
	2	69,3	1	0,94	0,012	0,128	<0,1	<0,1
	3	67,0	1	1,02	0,007	0,157	<0,1	<0,1
	4	60,1	1	0,77	0,004	0,094	<0,1	<0,1

59. The monitoring measurements were carried out by contractor/Dagi in Tbilisi Office Construction Site on June 2016 (See Annex 1). Location and data are included in the table below. According to the EMP/SSEMP requirements measurements of the dust, air quality and noise is done bi-annually.
60. The next monitoring measurements will be conducted in September 2016 and results will be reflected in the next July-December 2016 EMRs. According to data received in June 2016 the obtained results did not exceed the National Environmental Standard (Maximum Permissible Level) of Dust, CO, NO<sub>2</sub>, SO<sub>2</sub> and Noise, therefore no additional mitigations are required.

### Tbilisi Head Office

N	Place of measurement	Coordinates	Results				
			Dusts Mg/m <sup>3</sup>	CO Mg/m <sup>3</sup>	NO <sub>2</sub> Mg/m <sup>3</sup>	SO <sub>2</sub> Mg/m <sup>3</sup>	Noise db
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	70
1.	Jikia Street	X=0476565 Y=4619535	0.1	0.32	0,001	<0,1	78.7

### Compensation action plan and planting of vegetation/trees within the Reg-01 project

61. Contractor “Cobra” has developed the Compensation Action Plan (CAP) for planting vegetation/trees of the same species for the compensation of the removed red book listed trees at Tetramitsa reservoir and for the damage done to the biodiversity of Georgia. Before the removal of trees the Government of Georgia has issued an Ordinance N1147 “About removal of wooden plants included in the red data list from natural environment” (26th July of 2014). At the same time the MoENRP and its National Forestry Agency has identified a suiting place for planting the trees.
62. CAP was agreed with the MoENRP of Georgia in November 2015. Based on this CAP Contractor “Cobra” planted 50 individuals of Imeretian Oak trees (10 instead of each cut tree) and takes responsibility for taking care of saplings of the same species in suiting environment offered by the National Forestry Agency of MoENRP during the five years.

**Fig. 3:** 50 planted seedlings of Imeretian Oak trees



### PART III - ENVIRONMENTAL MANAGEMENT

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

##### **SSEMPs prepared under Ure-01 and Reg-02 project:**

63. Within the reporting period the following SSEMPs have been prepared under the Ure-01 and reg-02 projects: SSEMP for Shkedi reservoir (Reg-02) was prepared by contractor/ Pfeiffer, endorsed by Supervision Consultant/Eptisa, approved by UWSCG and reviewed/commented by the RETA National Environmental Consultant of ADB - Ms. Kate Dgebuadze. SSEMP for Ureki well fields (Ure-01) was prepared by contractor/Peri, endorsed by Supervision Consultant/Eptisa, approved by UWSCG and National Environmental Consultant Ms.Kate Dgebuadze. SSEMP for office bulding was prepared by contractor/Dagi, endorsed by Supervision Consultant/Eptisa, approved by UWSCG and reviewed/commented by the RETA National Environmental Consultant of ADB - Ms.Kate Dgebuadze.

**Table 4:** Status of Site-Specific Environmental management plans

Management Plan	Status	Date of Submission
Site-Specific EMP (SSEMP) under Reg-02 project, in particular: Shkedi Reservoir	Approved Sent to ADB	21 June 2016
Site-Specific EMP (SSEMP) under Ure-01 project Ureki Well fields	Approved Sent to ADB	20 June 2016
Site-Specific EMP (SSEMP) for office building	Approved Sent to ADB	March 2016

### 3.2 Site Inspections and Audits

64. Regular inspection and monitoring of sites were conducted for REG-01 and Ure-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 of the Environmental Consultant and the H&S manager of REG-01 and Ure-01 project contractors. 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-01 and Ure-01 projects.

### 3.3 Non-Compliance Notices

#### REG-01

65. The contractors were always informed on the detected non-compliances and were demanded to improve on the deadline set and send photos of improvements made together with the corrective action plans. Environmental team of Eptisa and UWSCG monitored the improvements during the next monitoring visits. Unimproved environmental issues were qualified as non-compliances and notices issued to contractor (Annex C).
66. 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.
67. Non-compliance notices have been issued by UWSCG/environmental team and SC/Eptisa after the site visits carried out on: 22 February, 26-28 February, 9-11 March, 12-13 April and 20-22 April and 7-8 June of 2016 (see Annex C).

### 3.4 Corrective Action Plans

68. For the purpose of resolving the observed issues, the corrective action plans have been developed by the contractor. The regular Environmental Meetings were also carried out with the participation of UWSCG/IPMO/UREP, Eptisa, contractors. During the meetings environmental issues and implementation of the mitigation measures were discussed. Agreements were reached that contractors should respond to the findings of the compliance monitoring carried out by SC and UWSCG.

**Table 5:** Actions taken for implementation of mitigation measures under REG-01 and Ure-01 projects and the Tbilisi head office by the end of June 2016

#### REG-01

Construction Site	Environmental Issues	Action taken
Kutaisi/ Kldiashvili Pumping Station	Noise emission of the Pumping Station is obviously high and NOT acceptable and exceed standards	<b>Not Completed</b>
	The noise level most generated by the pump and electrical motors is high and seems to be un-typical of the pumps used elsewhere in the project	The immediate actions is proposed by contractor in order to comply with Georgian legislation requirements are the following:  1.- Change the existing 6 mm steel door for an acoustic door, with a level of noise isolation of at least 40 dB.  2.- Change the ventilation window to the roof, so that the noise of this hole is not focused directly to the surrounding houses.  3.- Cover the walls with noise absorbent panels, noise absorption coefficient more than 0,8 for 1.000 Hz.  (end of July 2016)
	To discuss every available opportunity for Cobra and to agree on final solution to resolve the noise issue	Partially completed, for the short-term solution of the problem the following action was carried out by the contractor, the insulating material was installed inside the Pumping Station.
Kutaisi/TV Tower	All construction materials and waste should be removed from construction area	Completed
Kutaisi/Network	All construction materials should be properly stored	Completed
	Tarpaulins cover during materials transportation should be used	Completed

	Install safety signs, tapes and trench side barriers around all open tranches	Completed
	Safety personnel availability to avoid pedestrians damage	Completed
Kutaisi /Tetramitsa	Site trees should be fenced (add nutrition soil) and protected to avoid its damage	Completed
	The construction waste should be removed from fenced trees	Completed
	All construction materials should be properly segregated and stored adequately	Completed
	Household and Hazardous Waste containers (with cover) should be installed properly with relevant signs	Completed
	Accumulated waste soil and construction waste should be taken out of the site	Completed
Poti-Nabada	Site trees should be fenced (add nutrition soil)and protected to avoid its damage	Completed
	The construction waste should be removed from fenced trees	Completed
	All construction materials should be properly segregated and stored adequately	Partially Completed
	Household and Hazardous Waste containers (with cover) should be installed properly with relevant signs	Completed
	Accumulated waste soil and construction waste should be taken out of the site	Partially completed
	Site should be cleaned regularly	Partially Completed

#### URE-01

Construction Site	Environmental Issues	Action taken
Ureki/Network	Construction materials should be brought when needed to avoid its long time disposal of pipes in the streets	<b>Not completed</b>
	Tarpaulins cover during materials transportation should be used	Partially Completed
	Materials for refilling of tranches should be brought to the site when refilling is to start	Partially Completed
Ureki/Pumping Station	Construction area should be fenced with metal net material from all sides with proper lockable gate	Completed
	Proper safety and information signs should be installed at the entrance and perimeter of the site	Completed
	All trees at the construction area should be	Completed

	protected to avoid its damage	
	Proper household and hazardous waste container with relevant sign and cover should be installed	Completed

#### UWSCG Head Office Construction Site

Construction Site	Environmental Issues	Action taken
Tbilisi Head Office	Fuel tanks should be installed in special place with concrete floor and roofing	completed
	Fuel/oil spill response items(sand, sawdust, special containers) should be available at the site	Completed
	Site internally should be arranged properly and cleaned regularly	Completed
	Special place for parking should be arranged	Completed
	Gas pipeline should be fenced and protected to avoid its damage	Completed
	All site trees should be fenced and protected to avoid its damage	Completed
	Household and hazardous Waste containers should be installed with relevant signs	Completed
	All construction materials should be properly segregated and stored adequately	Completed

69. An Annual Environmental Compliance Safeguard Review Mission was carried out on 20-22 April 2016 to review environmental safeguards compliance of Tranche 1 project.

#### 3.5 Actions taken to reflect the findings of ADB mission carried out on 20-22 April 2016:

**Table 6: Status of findings of ADB mission carried out on 20-22 April 2016**

Project	Specific Issues	Deadline for submission/Implementation	Implementation Status
Status of findings of ADB mission carried out on 20-22 April 2016			
Rehabilitation of Water Supply System in Kutaisi, Poti and Anaklia – USIIP, T 1			
Reg-01 Kutaisi			
	Proper fencing should be installed in Kutaisi Vaja Pshavela reservoir.	May-June 2016	Completed
	Final compliance environmental audit should be conducted by ES of SC.	May-June 2016	Final compliance environmental audit will be conducted by ES of SC in August 2016.
	Final Environmental Audit Report	May 2016	Final Compliance

	under Reg-01 project (Kutaisi, Anaklia/Darcheli and Poti/Nabada) will be prepared and approved by PIU and ADB.		report will be prepared by the independent auditor after the completion of all construction activities within the Reg-01 projects. (September 2016)
<b>Reg-01/TW tower</b>			
	Proper fencing should be installed in Kutaisi TW Tower reservoir.		Completed
<b>Reg-01/Tetramitsa Reservoir reservoir</b>			
	Proper fencing should be installed in Kutaisi Tetramitsa reservoir.		Completed
<b>Reg-01/Poti</b>			
	Fencing of the construction territory will be installed in 3 weeks period.  Environmental specialist of SC to be monitor and implementation status to be reflected in quarterly report.	May 2016	Partially Completed. Fencing of the construction territory will be finalized after the completion of construction works.  Completed. Environmental specialist of SC monitored the process and implementation status reflected in quarterly report.
	Construction site which is located on the territory of the existing service center of UWSCG, need to be cleaned from dumping construction debris and scrap metals. Cleaning of the mentioned territory partially has been implemented but was not completed yet. Contractor instructed to clean the territory from the waste in.	May 2016	Completed
	Final Environmental Audit Report prepared in May 2016. To be approved by PIU and ADB.		Final Environmental Audit Report will be prepared by the independent auditor after the completion of all components within the Reg-01 projects.
<b>Reg-01/Darcheli</b>			
	Final Environmental Audit Report prepared in May 2016. To be approved by PIU and ADB.		Final Compliance report will be prepared by the independent

			auditor after the completion of all components under the Reg-01 projects.
Rehabilitation of Water Supply System in Ureki – T1, T2 T 3			
Ure-01			
	SSEMPs for reservoir 1 and 3, as well as for well fields are under preparation and will be submitted in May 2016. The NES to review and comment.	May 2016	<p>SSEMPS for well fields have been developed by Contractor/Peri endorsed by SC/Eptisa and approved by UWSCG in June 2016. But due to the fact that Location and design for Res-#1 is changed now the new SSEMP will be prepared as soon as design is completed.</p> <p>SSEMP for Reservoir #3 will be developed after the final location is agreed and approved.</p>

**Actions taken regarding the action plan of the EMR January-June 2016:**

- Fencing of Vaja-Pshavela, Tetramitsa and TW tower Reservoirs in Kutaisi are finalized.
- SSEMPs for Ureki well fields are prepared by Contractor/Peri, endorsed by SC/Eptisa and approved by UWSCG on June 2016. SSEMP for Res-01 will be updated as soon as final design is prepared. SSEMP for res-03 will be prepared as soon as final location will be selected and design developed (August 2016).
- Post construction audit of Reg-01 projects in Kutaisi, Poti and Anaklia is postponed until the completion of the all components within the Reg-01 project (September 2016).
- SSEMP for Office Construction in Tbilisi is prepared by contractor/DAGI, endorsed by SC/Eptisa and approved by UWSCG in March 2016.
- Monitoring of environmental quality under REG-01 project at each construction site in Kutaisi and Poti was conducted in June 2016 with particular reference to dust and noise. The measurement data is reflected in para 51 and Annex A.
- Monitoring of environmental quality under Ure-01 project at each project sites was conducted in June 2016 and the monitoring data are presented in Para 52 and Annex A.
- Monitoring of environmental quality under Tbilisi Head Office project was conducted in March 2013 and monitoring data are presented in Para 53 and Annex A.

### 3.6 Consultations and Complaints

#### Public Awareness Activities:

70. In January-June 2016 the public awareness activities were carried out for the households living in the central districts of Kutaisi.
71. Up to 3000 households were provided with the brochures and information about the project and planned activities. This brochures include information about the GRM System and GRC.
72. During the reporting period EPTISA PA consultants, UWSCG PR department and contractor were actively involved in continuous communication/consultations with the local population, and were providing updated information about the project progress, grievance commission, rehabilitation timelines and other information.

#### Trainings

73. On site environmental safeguard training were organized for URE-01 project contractor – LTD “Peri”, Tbilisi Head office contractor – Ltd “DAGI” on a regular bases during the site visits. Environmental specialists of the above mentioned contractors were introduced with all necessary safeguard requirements of ADB/SPS 2009.
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:
  - Site-specific Environmental Management Plans and their implementation
  - Preparation of Site-specific Environmental Management Plan for Dagi environmental team
  - Potential environmental negative impacts during construction process

#### Grievance redresses mechanism (GRM)

76. 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. Detail procedures for GRM System is provided in Annex E.
77. As it was mentioned above APs were fully informed through very intensive public consultation process carried out within Reg-01 projects of their rights and of the procedures for addressing complaints whether verbally or in writing during planning and implementation of the project. Up to 4 complains, related to environment have been recorded during the reporting period under the Reg-01 project in Kutaisi. Complaints were related to the temporarily blocking of the access to the residential houses, temporary blockage of the water supply during the construction activities carried out by Cobra (contractor). Local Service center informed the Donor Relations Department and its UREP immediately about the above mentioned complaint. UREP applied to contractor and SC and requested to immediately clean the territory and rehabilitate damaged pipes, all these cases were satisfactorily closed in a very short time.

## PART IV – CONCLUSIONS AND ACTION PLAN FOR THE NEXT PERIOD

### 4.1 Conclusions and recommendations

1. As presented in this report, Tranche-1 of this Investment Program is being implemented in compliance with the ADB Safeguards Policy Statement, 2009, National Legislation and overall EARF.
2. Necessary instructions have been given to the Contractor by UWSCG and SC to follow the EMPs and SEMP for REG-01 project.
3. More detailed recommendations are with indication of the entities responsible for their implementation are provided in the table below:

**Table 7: Recommendations to address Environmental Issues**

Recommendations REG-01	Responsible Party
<b>Kutaisi: Kldiashvili Reservoir</b>	
Noise emission of the Pumping Station is obviously high and NOT acceptable and exceed standards	Contractor, SC
The noise level most likely generated by the pump and electrical motors is high and seems to be un-typical of the pumps used elsewhere in the project	
To discuss every available opportunity for Cobra and to agree on final solution to resolve the noise issue	
<b>Poti: Nabada Site</b>	
Proper fencing	Contractor
All construction materials should be properly segregated and stored adequately	Contractor
Accumulated waste soil and construction waste should be taken out of the site	Contractor
Site should be cleaned regularly	Contractor
<b>Recommendations URE-01</b>	
<b>Ureki: Networks</b>	
Construction materials should be brought when needed to avoid its long time disposal in the streets (to be improved immediately)	Contractor
Tarpaulins cover during materials transportation should be used	Contractor
Materials for refilling of tranches should be brought to the site when refilling is to start	Contractor

### 4.2 Action Plan for the next period

- Finalize fencing of Nabada Reservoirs in Poti.
- Contractor to update, SC to endorse and UWSCG to approve SSEMPs under the Ure-01 projects for res-01, res-03 (September 2016).
- Carry out post construction environmental audit of Reg-01 projects in Kutaisi, Poti and Anaklia (September 2016) and prepare Final Environmental Audit Report.

- Resolve noise issue on Kldiashvili Reservoir (to be improved immediately - July 2016)
- Ensure proper storage of construction materials (pipes) and their delivery when needed to avoid its long time disposal in the streets (to be improved immediately - July 2016)
- Inspection and monitoring of Construction sites including Mestia WTP and Shkedi Reservoir (July-August 2016)

**Table 8: Conduct monitoring of environmental quality under Ure-01 project at each site**

Parameters	Biannual measurement
Dust	September 2016
Vibration	September 2016
Carbon monoxide	September 2016
Nitrogen dioxide	September 2016
Sulfur dioxide	September 2016
Noise	September 2016

**Table 9: Conduct monitoring of environmental quality under Tbilisi Head Office**

Parameters	Biannual measurement
Dust	September 2016
Vibration	September 2016
Carbon monoxide	September 2016
Nitrogen dioxide	September 2016
Sulfur dioxide	September 2016
Noise	September 2016

## ANNEX A: MONITORING MEASUREMENTS DATA

### Chemical analysis of ambient air and noise measurement results (Reg-01, Ure-01 and Tbilisi Head Office)

ატმოსფერული ჰაერის სინჯების ქიმიური ანალიზისა და ხმაურის დონის გაზომვის შედეგები

№	გაზომვის ადგილი	GPS კოორდინატები WGS 84	გაზომვის შედეგები								
			მტვერი (PM), მკ/მ <sup>3</sup>		ნაწილაკების მონოქსიდი (CO), მკ/მ <sup>3</sup>		აზოტის დიოქსიდი (NO <sub>2</sub> ), მკ/მ <sup>3</sup>		სოფურის დიოქსიდი (SO <sub>2</sub> ), მკ/მ <sup>3</sup>		ხმაური, დბ
			გაზომვის შედეგი	ზღკ	გაზომვის შედეგი	ზღკ	გაზომვის შედეგი	ზღკ	გაზომვის შედეგი	ზღკ	გაზომვის შედეგი
1	ქ. ქუთაისი, თეთრამიწას რესურსი	N4683582 E309673	0.028	0.5	0.23	5.0	0.001	0.2	<0.1	0.5	46
2	ქ. ქუთაისი, ვაჟა- ფშაველას 48	N4682535 E309743	0.038		0.28		0.001		<0.1		49
3	ქ. ქუთაისი, რუას ქ. №1	N4683571 E310994	0.03		0.25		0.001		<0.1		52
4	ქ. ქუთაისი, კლდიაშვილის ქ. 104	N4682638 E312274	0.039		0.22		0.002		<0.1		56
5	ქ. ქუთაისი, სოლომონ მე-2ს ქ. 7	N4681770 E311898	0.035		0.3		0.002		<0.1		52
6	ქ. ქუთაისი, ტელეანდის რესურსი	N4683429 E313492	0.049		0.25		0.002		<0.1		48
7	ქ. ქუთაისი, დესელიძის მე-2 შეს. 9	N4683514 E311868	0.038		0.41		0.01		<0.1		63
8	ფოთი, წყალსადენის მიმდებარე ტერიტორია, უახლოეს საცხოვრებელ სახლთან	N4671946 E720628	0.041		0.69		0.025		<0.1		58
9	სოფ. ხორვა	N4678430 E731259	0.098		0.18		0.015		<0.1		48
10	სოფ. ნოსირი	N4683018 E261548	0.13		0.55		0.02		<0.1		69

გაზომვები ჩატარა /პ. ჰანკოტაძემ/

27.06.2016წ.



ინფორმაცია  
 ატმოსფერულ ჰაერში დამაბინძურებელ ინგრედიენტთა კონცენტრაციის შესახებ  
 შპს „ფერი“ 30 ივნისი 2016

სიხვის აღების ადგილი, კოორდინატები	№ ჯგუფი	ხმაური დბ	კონცენტრაცია მგ/მ <sup>3</sup>					
			ნაჯერი ნახშირწყალბადები	ნახშირბადის ოქსიდი CO	აზოტის დიოქსიდი NO <sub>2</sub>	მტვერი	გოგირდის დიოქსიდი SO <sub>2</sub>	გოგირდწყალბადი H <sub>2</sub> S
წვერბაღალა X 0730415 Y 4649265	1	40.1	0	0.11	<0.001	0.002	<0.1	<0.1
	2	41.3	0	0.22	<0.001	0.004	<0.1	<0.1
	3	41.2	0	0.22	<0.001	0.006	<0.1	<0.1
	4	39.7	0	0.08	<0.001	0.001	<0.1	<0.1
ურიკვი (ბოლიციის ზოლი) X 729069 Y 4652470	1	48.2	0	0.31	<0.001	0.032	<0.1	<0.1
	2	64.2	1	1.28	0.005	0.248	<0.1	<0.1
	3	63.7	1	1.29	0.007	0.201	<0.1	<0.1
	4	64.4	1	1.2	0.004	0.194	<0.1	<0.1
ურიკვი (5 სართულიანებიდან) X 730159 Y 4652634	1	47.3	0	0.12	0.001	0.003	<0.1	<0.1
	2	50.1	1	1.18	0.002	0.027	<0.1	<0.1
	3	58.0	1	1.29	0.008	0.021	<0.1	<0.1
	4	46.4	0	0.8	0.001	0.02	<0.1	<0.1
ნაბანები X 730195 Y 4648085	1	48.6	0	0.22	0.001	0.007	<0.1	<0.1
	2	69.3	1	0.94	0.012	0.128	<0.1	<0.1
	3	67.0	1	1.02	0.007	0.157	<0.1	<0.1
	4	60.1	1	0.77	0.004	0.094	<0.1	<0.1

შემსრულებლები:  
 მთავარი სპეციალისტი  
 მთავარი სპეციალისტი  
 უფროსი სპეციალისტი  
 შეთანხმებულია:  
 გარემოს დამაბინძურების მონიტორინგის დეპარტამენტის  
 უფროსის მოვალეობის შემსრულებელი



ო. ყენია  
 ს. ხაკვაძე  
 გ. ხაჩიშვილი

თ. მალაგველიძე

**Concentration of harmful substances in atmospheric**

Samplin place coordinates	Sample N	Noise DB	Concentration mg/m <sup>3</sup>					
			Saturated hydrocarbons	Carbon oxide CO	Nitrogen dioxide NO <sub>2</sub>	Dust	Sulfur dioxide SO <sub>2</sub>	Hydrogen sulfide H <sub>2</sub> S
<b>Tsvermagala</b> X 0730415 Y 4649265	1	40,1	0	0,11	<0,001	0,002	<0,1	<0,1
	2	41,3	0	0,22	<0,001	0,004	<0,1	<0,1
	3	41,2	0	0,22	<0,001	0,006	<0,1	<0,1
	4	39,7	0	0,08	<0,001	0,001	<0,1	<0,1
<b>Ureki</b> X 729069 Y 4652470	1	48,2	0	0,31	<0,001	0,032	<0,1	<0,1
	2	64,2	1	1,28	0,005	0,248	<0,1	<0,1
	3	63,7	1	1,29	0,007	0,201	<0,1	<0,1
	4	64,4	1	1,2	0,004	0,194	<0,1	<0,1
<b>Ureki (Beside five-story building)</b> X 730159 Y 4652634	1	47,3	0	0,12	0,001	0,003	<0,1	<0,1
	2	50,1	1	1,18	0,002	0,027	<0,1	<0,1
	3	58,0	1	1,29	0,008	0,021	<0,1	<0,1
	4	46,4	0	0,8	0,001	0,02	<0,1	<0,1
<b>Natanebi</b> X 730195 Y 4648085	1	48,6	0	0,22	0,001	0,007	<0,1	<0,1
	2	69,3	1	0,94	0,012	0,128	<0,1	<0,1
	3	67,0	1	1,02	0,007	0,157	<0,1	<0,1
	4	60,1	1	0,77	0,004	0,094	<0,1	<0,1

**Executors:**  
Main specialist  
Main specialist  
Senior specialist

*O. Kenia*  
*S. Khatsava*  
*G. Khachishvili*

**Agreed:**  
Acting Head Environmental Pollution  
Monitoring Department



T. Maglakelidze



№ 121-260

18 03 2016

შპს "დაგი"-ს  
დირექტორს ბ-ნ მიხეილ შარანგიას

ბატონო მიხეილ,

საქართველოს გარემოსა და ბუნებრივი რესურსების დაცვის სამინისტროს ს.ს.ი.პ „გარემოს ეროვნულ სააგენტო“-სა და შპს „დაგი“-ს შორის 2016 წლის 07 მარტს გაფორმებული ფასიანი მომსახურების შესახებ ფმ-3/232 ხელშეკრულების თანახმად, გაწვდით თბილისში, თქვენს მიერ მითითებულ ატმოსფერული ჰაერის ერთ წერტილში - ხმაურის, ვიბრაციის, ნახშირის დიოქსიდის, აზოტის დიოქსიდის, მტვერისა და გოგირდის დიოქსიდის შემცველობის გაზომვის შედეგებს.

დანართი: 1 გვ.

პატივისცემით,

სააგენტოს უფროსი



თამარ ბაგრატია



ხელშეკრულება Nგმ 3/232

დამკვეთის მიერ მითითებულ I(ერთი) წერტილში ატმოსფერულ ჰაერში მტვრის, გოგირდის დიოქსიდის, ნახშირჟანგისა და აზოტის დიოქსიდის კონცენტრაციების აგრეთვე ხმაურისა და ვიბრაციის დონეების გაზომვების შედეგები.

ქ.თბილისი, ჯიქიას ქუჩა. კოორდინატები : X=0476565 ; Y=4619535

14.03.2016 , 12:00-13:00 სთ

გაზომვის ადგილი	მტვრის კონცენტრაცია მგ/მ <sup>3</sup>	გოგირდის დიოქსიდის კონცენტრაცია, მგ/მ <sup>3</sup>	ნახშირბადის ოქსიდის კონცენტრაცია, მგ/მ <sup>3</sup>	აზოტის დიოქსიდის კონცენტრაცია, მგ/მ <sup>3</sup>	ხმაურის მაქსიმალური დონე, დბ	ვიბრაციის სიჩქარე, მმ/წმ
ჯიქიას ქუჩა, კოორდინატები :X=0476565; Y=4619535	0,1	<0,1	0,32	0,001	78,7	0
ზღვრულად დასაშვები კონცენტრაცია	0,5	0,5	5	0,2	70	0,1

შენიშვნა. გაზომვები ჩატარდა ხელსაწყოებით Элан CO-50/NO<sub>2</sub>.VM-6360 ,Gas Alezt Micro 5, CEL-63X, CEL-712.

შემსრულებლები:

ო.ყენია *ყენია*  
გ.ნარსია *გ.ნარსია*

შეთანხმებულია:

გარემოს დაბინძურების

მონიტორინგის დეპარტამენტის უფროსი



მ.არაბიძე

**ANNEX B: PROJECT PHOTOS**

**Reg-01: Kutaisi/Vazha Pshavela Reservoir**



**Reg-01: Kuraisi/Tetramitsa Reservoir**



**Reg-01: Kutaisi/Tetramitsa Reservoir**



**Reg-01: Poti/Nabada Reservoir**



Ure-01: Ureki/Pumping Station





**Tbilisi Office Building**



**ANNEX C: NON-COMPLIANCE NOTICES**

**NON-COMPLIANCE NOTICE (17-18 February, 2016) – Reg-01**

<b>Project:USIIP</b>	<b>Non-compliance Notice KUTAISI POTI</b>
<b>Contract No:REG-01</b>	
<b>Contractor: COBRA</b>	
<b>tsa site; TV Tower site; Kutaisi Network</b>	

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**.

**GENERAL COMMENT FOR ALL SITES:**

Site internally should be cleaned regularly. All workers should be equipped with complete PPE, Household and Hazardous waste containers should be installed

**NON-COMPLIANCE IN KUTAISI**

**TETRAMITSA SITE**

Site trees should be fenced (add nutrition soil)and protected to avoid its damage  
 The construction waste should be removed from fenced trees  
 All construction materials should be properly segregated and stored adequately  
 Household and Hazardous Waste containers (with cover) should be installed properly with relevant signs  
 Accumulated waste soil and construction waste should be taken out of the site  
 Site should be cleaned regularly



**TV TOWER SITE**

All construction materials and waste should be removed from construction area  
 Site should be cleaned regularly



**KUTAISI NETWORK**

All construction materials should be properly stored  
 Tarpaulins cover during materials transportation should be used  
 Install safety signs, tapes and trench side barriers around all open tranches  
 Safety personnel availability to avoid pedestrians damage



**NON-COMPLIANCE IN POTI**  
**NABADA SITE**

- All construction materials should be properly stored
- Household and Hazardous waste containers should be installed
- Oil spill items should be available at the site
- Site trees should be fenced and protected to avoid its damage
- Construction waste should be removed
- Site internally should be arranged properly and cleaned regularly



All these conditions have to be remedied within three days (by the 22 February 2016) by the prime Contractor (Cobra).

**Date of site visits: 17.02-18.02.2016**

Irakli Legashvili  
 EPTISA - Environment

**NON-COMPLIANCE NOTICE (21 April, 2016) – Reg-01**  
**Non-Compliance Notice**

<b>Project: USIIP</b>	<b>Non-compliance Notice KUTAISI</b>
<b>Contract No: REG-01</b>	
<b>Contractor: COBRA</b>	
<b>tsa site</b>	

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**  
**TETRAMITSA SITE**

- Site trees should be well protected to avoid its damage
- All construction materials should be properly segregated and stored adequately
- Proper Household and Hazardous Waste containers should be installed with relevant signs
- Existing Waste container (non-relevant) should be removed timely
- Site should be cleaned regularly

All workers should be equipped with complete PPE



All these conditions have to be remedied within two days (by the end of 5 May 2016) by the prime Contractor (Cobra).

**Date of site visits: 21.04.2016**

Ketevan Chomakhidze – USIIP UWSCG

Maka Goderdzishvili - UWSCG

Irakli Legashvili - Eptisa

**NON-COMPLIANCE NOTICE (23 March, 2016) – Tbilisi Head Office  
NON-COMPLIANCE NOTICE**

<b>Project:USIIP</b>	<b>Non-compliance Notice Tbilisi</b>
<b>Contract No:TBI-01</b>	
<b>Contractor:“DAGI” LLC</b>	
<b>USIIP – UWSCG Head Office Construction</b>	
<p>This notice is to remind you, the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented <b>urgently</b>.  <b>Please make a reference to the project IEE/EMP, SSEMP documents</b></p>	
<p><b><u>NON-COMPLIANCE</u></b>  <b>USIIP – UWSCG Head Office Construction Site</b></p> <ul style="list-style-type: none"> <li>Fuel tanks should be installed in special place with concrete floor and roofing</li> <li>Fuel/oil spill response items(sand, sawdust, special containers) should be available at the site</li> <li>Special place for parking should be arranged</li> <li>Gas pipeline should be fenced and protected to avoid its damage</li> <li>All site trees should be fenced and protected to avoid its damage</li> <li>Household and Hazardous Waste containers should be installed with relevant signs</li> </ul>	



Corrective Action Plan (CAP) should be provided as soon as possible. All these conditions have to be initiated and/or remedied within five days (by the end of 28March 2016) by the prime Contractor (Cobra).

**Date of site visits:22.03.2016**

**NON-COMPLIANCE NOTICE (22 February, 2016) – Ure-01  
Non-Compliance Notice**

<b>Project: USIIP</b>	<b>Non-compliance Notice UREKI</b>
<b>Contract No: URE-01</b>	
<b>Contractor: PERI</b>	
<b>Location: Pumping Station</b>	

This notice is to advise 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 UREKI NETWORK**

**Construction materials should be brought when needed to avoid its long time disposal in the streets (to be improved immediately)**



Tarpaulins cover during materials transportation should be used  
Materials for refilling of tranches should be brought to the site when refilling is to start



**PUMPING STATION**

Construction area should be fenced with metal net material from all sides with proper lockable gate  
Proper safety and information signs should be installed at the entrance and perimeter of the site  
All trees at the construction area should be protected to avoid its damage  
Proper household and hazardous waste container with relevant sign and cover should be installed  
Oil spill elimination items should be installed  
All workers should be equipped with complete PPE



All these conditions have to be remedied within three days (by the 22 February 2016) by the prime Contractor (Peri).

**Date of site visits: 17-18.02.16**

Irakli Legashvili  
EPTISA - Environment

## 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-01 Kutaisi Kldiashvili			
	Implement all measures to reduce noise level at Kutaisi Kldiashvili reservoir	Despite of numerous discussions, meetings and warnings the situation is not improved yet.	Contractor proposed best agreed option to SC and UWSCG for solving the problem within one months.
Reg-01 Poti Nabada			
	All construction materials should be properly segregated and stored adequately	Despite of issuing of non-compliance notes and numerous instruction given to Contractor's ES, the situation was only partially improved	Contractor promised to improve the situation immediately and send the improved photos
	Accumulated waste soil and construction waste should be taken out of the site		
	Site should be cleaned regularly		
Ure-01 network			
	Construction materials should be brought when needed to avoid its long time disposal in the streets	Partially completed	Contractor promised to improve the situation and send the improved photos
	All open tranches should be fenced with safety lines to avoid accident	Completed	
	Accumulated waste soil should be removed from construction area and disposed in a proper place	Completed	

## ANNEX E:

### Grievance redresses mechanism (GRM)

78. There was no GRM system existing under USIIP before the Reg-01 project. Therefore, there was no structured mechanism and procedure to help the affected population and stakeholders send their grievances related to project-induced environmental impacts and nuisances to UWSCG or directly to the administrative bodies responsible for environmental protection.
79. 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.
80. 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.
81. 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. As it was mentioned above the GRM in Kutaisi has been operational since April 2014, and the system operates in three stages:
82. During the first stage, complaints are discussed within two weeks of being received by the local service centre of UWSCG (e.g. Kutaisi office), 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.
83. The service centre operators, who are trained<sup>1</sup> in USIIP/Reg-01 project, 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 system<sup>2</sup> 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.
84. 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.
85. 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:

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<sup>1</sup> 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.

<sup>2</sup>The **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 eDocumentservice offers an opportunity to manage, find, and track documents for information-intensive organizations.

- Name, ID, address and contact details of the claimant
  - Description of the essence of the complaint
  - 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
- 86.** 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.
- 87.** 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.
- 88.** 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*