

SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

Project Number: 43405-027

Reporting Period: July-December 2018

GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 5) (FINANCED BY THE ASIAN DEVELOPMENT BANK)

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

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

Endorsed by: Maka Goderdzishvili, Head, Department Environmental Protection and Permits

January 2019

Table of Contents

I. INTRODUCTION	4
1.1 Preamble	4
1.2 Headline Information	4
II. PROJECT DESCRIPTION AND CURRENT ACTIVITIES	4
2.1 Project Description	4
2.2 Project Contracts and Management	5
2.3 Project Activities During Current Reporting Period	9
2.4 Description of Any Changes to Project Design	14
2.5 Description of Any Changes to Agreed Construction methods	14
III. ENVIRONMENTAL SAFEGUARD ACTIVITIES	15
3.1 General Description of Environmental Safeguard Activities	15
3.2 Site Audit	17
3.3 Issues Tracking (Based on Non-Conformance Notices)	30
3.4 Trends	31
3.4 Unanticipated Environmental Impacts or Risks	31
IV. RESULTS OF ENVIRONMENTAL MONITORING	31
4.1 Overview of Monitoring Conducted during Current Period	31
4.2 Trends.....	35
4.3 Summary of Monitoring outcomes	35
4.4 Material resources Utilization	35
4.4.1 Current Period	35
4.4.2 Cumulative Resources Utilization.....	36
4.5 Waste Management	36
4.5.1 Current Period	36
4.5.2 Cumulative Waste Generation	36
4.6 Health and Safety.....	36
4.6.1 Community Health and Safety	36
4.6.2 Worker Safety and Health	37
4.7 Training	38
V. FUNCTIONING OF THE SEMP	38
5.1 SEMP Review	38
VI. GOOD PRACTICE AND OPPRTUNITY FOR IMPROVEMENT	38
6.1 Good Practice	38
6.2 Opportunities for Improvement	39
VII. SUMMARU AND RECOMMENDATIONS	39
7.1 Summary.....	39
7.2 Recommendations.....	39

ABBREVIATIONS

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

I. INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for the Urban Services Improvement Investment Program, Tranche 5.
2. This report is the 3rd Environmental Monitoring Review (EMR) of Tranche 5 under USIIP.

1.2 Headline Information

3. Contractors in accordance with USIIP / T5 usually follow the instructions given by the Supervision Consultant and the UWSCG / USIIP during environmental monitoring of construction sites. Non-conformance notice is issued by SC and UWSCG when necessary. 32% of the discrepancies still remain unresolved, this is basically the proper organization and cleaning of the sites on a regular basis within the framework of the subproject REG-03 / and the protection of open trenches during construction within the subproject Zug-02.
4. Environmental specialist of USIIP, Ms. Kate Chomakhidze conducted on-site trainings for contractor during the site visits clearly explaining what the proposed corrective actions are for the mentioned non-compliances.
5. All improvements in the framework of the subprojects ZUG-02 and REG-03/a will be reflected in the next report on the state of the environment in January-June 2019.

II. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

6. 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.
7. 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.

8. Tranche 5 of the Investment Program includes:
- Construction of Sewage System in Zugdidi (ZUG-02);
 - Construction of Wastewater Treatment Plants in Zugdidi (A) – REG-03a
 - Construction of Waste Water treatment Plant in Mestia (B) - REG-03b

The following projects are financed under Tranche 5:

9. **Construction of Sewage System in Zugdidi (ZUG-02).** The Zugdidi wastewater project envisages the rehabilitation and extension of the sewer network with gravity sewers and pressure lines and the construction of wastewater pumping stations. The project measures for the sewer network comprise the laying of 160 km new gravity pipes (DN 100 to DN 800) and 9.7 km new pressure pipes (OD 110 and OD 630). There will be 24 new wastewater pumping stations. The new network will convey the wastewater to a new wastewater treatment plant, which will be constructed under Reg-03 – Zugdidi (A) WWTP project.
10. The contract No P43405-ICB-Zug-02 was signed on February 1, 2017 with Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG, The date of completion of the contract is February 2020.
11. **Construction of Wastewater Treatment Plant in Zugdidi (REG-03a).** The project comprises of the construction of new Wastewater Treatment Plant with the capacity of 22,000 m³/day.
12. The contract No UWSCG-USIIP-ICB-REG-03a was signed on February 1, 2017 with “JV “Pfeiffer - EMIT” comprised by “Ludwig Pfeifer Hoch – and Tiefbau GmbH7Co. KG (Germany)” and “EMIT |Group – Ercole Marelli Impianti Tecnologici S.r.l. (Italy)”, the date of completion of the contract is January 1, 2020.
13. **Construction of Wastewater Treatment Plant in Mestia (REG-03b).** The project comprises of the construction of new Wastewater Treatment Plant with the capacity of 3,200 m³/day. No contract was signed under REG-03b project as yet.

2.2 Project Contracts and Management

14. The following agencies are involved in implementing the Investment program: Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) responsible for management, coordination and execution of all activities funded under the loan. MoRDI has overall responsibility for compliance with loan covenants.
15. Ministry of Environmental Protection and Agriculture of Georgia (MEPA). MEPA has the overall responsibility for protection of environment in Georgia. The Department of Permits of MEPA is responsible for reviewing EIAs and for issuance of the Environmental Permits. MEPA is the main state body pursuing state policy in the sphere of environment. Their functions for regulating economic or development activities with regard to environmental protection include:
- Issuing permits for project development (Environmental Decision)
 - Setting emission limits and issuing surface water intake and discharge consents
 - Responding to incidents and complaint

- 16.** United Water Supply Company of Georgia (UWSCG) is the implementing agency (IA), which is responsible for administration, implementation (design, construction and operation) and all day-to-day activities under the loan. Since September 2018, the Investment Program Management Office (IPMO) under UWSCG is Project Management Department, the Head of Department is Mr. Giorgi Archaia. Environmental issues are followed by the Department of Environmental Protection and Permits of UWSCG. The head of the department is Ms. Maka Goderdzishvili. Ms. Ketevan Chomakhidze is the Environmental Specialist of USIIP under the Department of Environmental Protection and Permits.
- 17.** UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) – Posch&Partners Consulting Engineers under T5. 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.
- 18.** All mitigation measures during construction are implemented respectively by the contractor companies: Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG and Ludwig Pfeifer Hoch – and Tiefbau GmbH7Co. Each contractor company have Environmental and safety officers responsible for HSE issues during construction process. Mr. Nikoloz Neparidze is simultaneously responsible for EH&S issues under ZUG-02 sub-project and only for Environmental Issues under ZUG-03/a sub-project. Mr. Irakli Abuladze is responsible for H&S issues under Reg-03/a sub-project.
- 19.** Ms. Tiko Zhizhiashvili is Environmental H&S specialist of Supervision Consultant Posch. Construction companies are monitored by the supervision consultant's (Posch) environmental specialist – Ms. Tiko Zhizhiashvili and Environmental Specialist of UWSCG/USIIP Ms. Ketevan Chomakhidze. Environmental Specialists of SC and UWSCG/USIIP conducted routine observations and surveys of project sites, issues non-compliance notes. ES of Posch prepares quarterly environmental reports and submits to UWSCG.
- 20.** The Contractor, prior to the onset of the construction, is obliged to conduct a number of studies and develop environmental plans, including "Site Environment Management Plan" (SEMP). Such plans can be further subdivided into Topic Specific or Site Specific EMP's. The number of such plans will depend upon the type of project, complexity and sensitivity of the receiving environment.
- 21.** Topic Specific EMPs are developed on a topic by topic basis. For example:

 - Waste Management Plans;
 - Traffic Management Plans;
 - Protected Species Management Plans;
 - Water Management Plans.
- 22.** These plans are detailed and set out how the project will address potential issues identified in the impact assessment process and ensure that specific mitigation and

monitoring measures are fully implemented. A topic specific environmental management plan will cover all of the project.

- 23. The environmental specialist of UWSCG/USIIP assists and advise the Department of Environmental Protection and Permits of UWSCG for implementation of USIIP in compliance with the ADB Safeguard Policy Statement 2009 and National Legislation, and oversee the work of DCs and SCs in safeguards compliance. ES supports DEPP in EARF implementation, in particular, reviewing IEE/EIA Reports, overseeing implementation of EMPs, Reviewing and approving SEMP and carrying out training and capacity-building activities in cooperation with Supervision Company. The ES prepares Semi-annual and annual environmental monitoring reports and submits to ADB.
- 24. Department of Environmental Protection and Permits of UWSCG is responsible for the implementation of mitigation and monitoring measures during construction and operation of subprojects under USIIP. Currently DEPP is staffed with a Head of Department and 4 specialists, those are responsible for environmental safeguard and construction permission issues.
- 25. 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

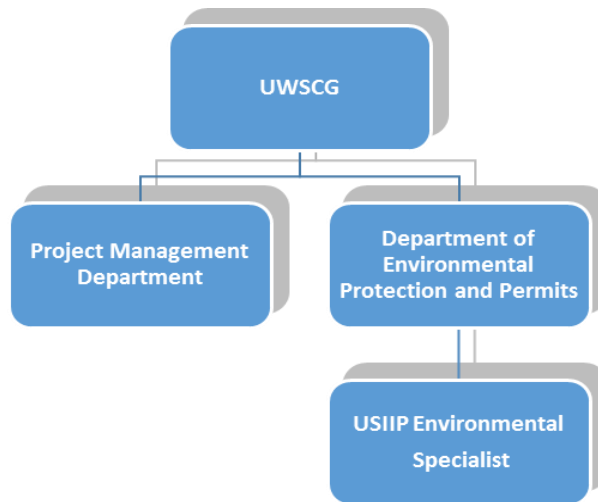
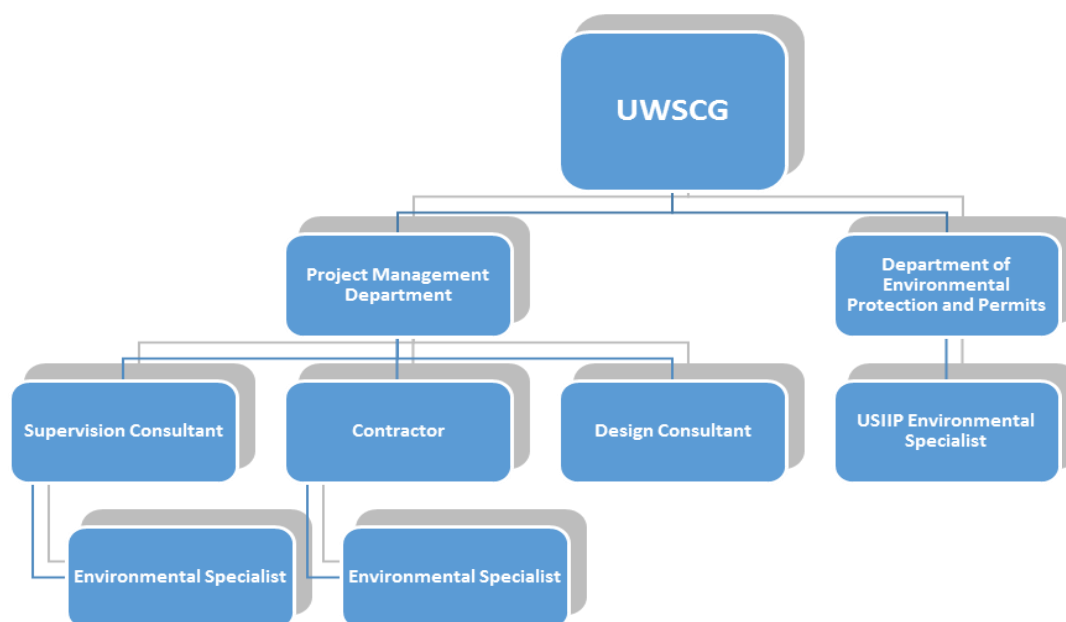


Figure 2: Structure Diagram of the Agencies Involved in Investment Program Implementation



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

Table 1: List of Main Organizations under USIIP/T5

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Lender	Asian Development Bank	Head Office, Environmental Specialist, Portfolio, Results, Safeguards and Gender Unit (PSG), CWRD.	Duncan Lang dlang@adb.org
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 595 070442 nnadashvili@adb.org
		ADB RETA International-Regional Environmental Consultant	Keti Dgebuadze Tel: +995 577232937 ketdgeb@yahoo.com
Borrower	UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
			E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Projects Management, Head	Mr. Giorgi Archaia Tel: +995 577 380213 E-mail: G.Archaia@water.gov.ge
Borrower	UWSCG/USIIP/T5	Environmental Specialist	Ms. Ketevan Chomakhidze Tel: +995 577 380309 E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	Posch&Partners Consulting Engineers	Environmental Specialist:	Mr. Tinatin ZhiZhiashvili Tel: +995 577 380113 E-mail: tikozhizhiashvili@yahoo.com
Contractor ZUG-02	Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG	Environmental H&S Specialist	Mr. Nikoloz Neparidze Tel: +995 599 346821 E-mail: nikoloz.neparidze@ludwigpfeiffer.com
Contractor REG-03a	JV "Pfeiffer - EMIT" comprised by "Ludwig Pfeiffer Hoch – and Tiefbau GmbH7Co. KG (Germany)" and "EMIT Group – Ercole Marelli Impianti Tecnologici S.r.l. (Italy)	Environmental H&S Specialist H&S Specialist	Mr. Nikoloz Neparidze Tel: +995 599 346821 E-mail: nikoloz.neparidze@ludwigpfeiffer.com Mr. Irakli Abuladze Tel: +995 568 012858 E-mail: irakli.abuladze.1974@gmail.com

2.3 Project Activities During Current Reporting Period

27. The Contract under ZUG-02 project enters in the last six months of 2018 with low progress from the previous two years of only 36% completed Works against 61% of elapsed time. There are main issues which need to be resolved urgently to enable the progress increase for timely completion. The site coordination and control of the works are also due to be improved to ensure the expected progress with actual Works.

28. The actual Works on site have progressed with average of 3.9 km completed pipe installations per month against the required 6.7 km. Separately progress of Works is recorded with:

❖ Mobilization

- Site offices completed with facilities (furniture, internet, phone connection, and water and toilet facilities) are established on site, both for Contractor and for Engineer/Employer
- Concrete Batching Plant is delayed in final start-up
- Surveying team is fully active on site (work on setting out, design survey checks and reports)
- Health and safety equipment mobilization is in completion stage
- Procurement of materials is ongoing.
 - PP manholes are in delivery stage
 - PE pipes and fittings are delivered in stages

❖ Construction of a new sewerage system

- Submitting of detailed method statements is ongoing.
- Works in the Western zone are progressing and two lines in the Hospital zone have started by the end of the reported period
- Machinery for construction is on site

29. Progress of construction activities under ZUG-02 project during the reporting period is presented in the Table 2 below.

Table 2: progress of construction activities ZUG-02

Site	Cleaning and reconstruction of existing collectors
Zug-02	
Works undertaken during July-December 2018	3.82 km
Site	Installation of New Collectors
Works undertaken during July-December 2018	31,12 km
	New House Connection
Works undertaken during July-December 2018	327

Site	Cleaning and reconstruction of existing collectors
Zug-02	

- 30.** The Contractor under REG-03/a project has not achieved the planned results due to the 4-month delay in the design work. However, the construction work could finally commence in early August 2018 and the completion date can be met from today's perspective.
- 31.** REG-03a Contractor has mainly recovered the cumulated delay by slow mobilization and the Design stage prolongation with efficient construction works organization.
- 32.** The updated organization chart of the key and non-key personnel employed by JV "Pfeiffer- EMIT" is enclosed in the below figure. The team members are divided as follows:

Management team

for

- Dusan Arbanovski (JV Director)
- Miroslav Zivkovic (Project Coordinator)
- Serhan Filiz (Project Coordinator)
- Nikola Marinko (Project Manager)

Site Eng. /Constr. Superintendents:

- Tamara Plese (Document Control)
- Carmen Vlad (Project Administrator)
- Giuseppe Colucci (Procurement Specialist Abroad)
- Vano Tisklauri (Procurement Specialist Georgia)
- Bojana Pavlovic (QAQC Manager)
- Semih Tasketin (StartUp Manager)
- Dejan Filipovic (Construction Manager)
- Ruslan Shonia (Site Eng. Civil Works)
- Celal Coskun (Contr. Exp. Mechanical Equipment)
- Angeles Barron (Constr. Exp. Electrical Equipment)
- Nikoloz Chkhaidze (Foreman – Prime Concrete's Project Manager);
- Karamzin Kvaratskhelia (Foreman – New Power's Project Manager)

Design team:

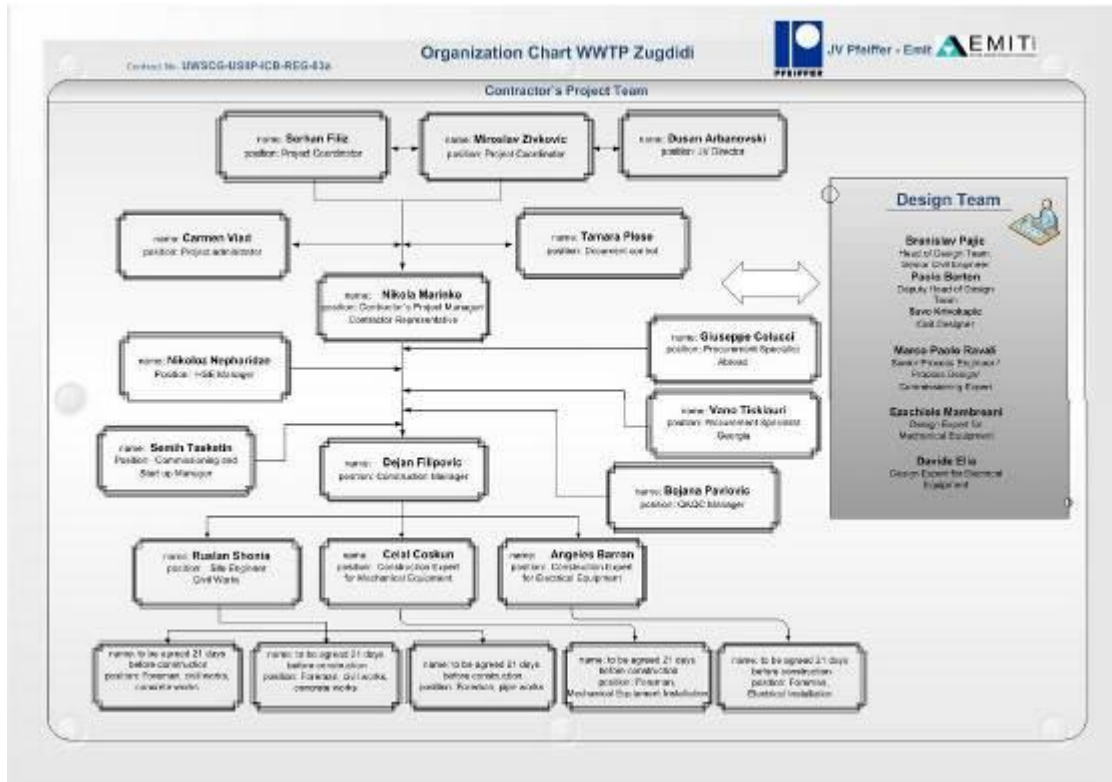
- Branislav Pajic (Head of Design Team)
- Paolo Berton (Deputy Head of Design Team)
- Savo Krivokapic (Civil Engineer/Designer)
- Davide Elia (Electrical Engineer/Designer)

- Marko Paolo Ravali (Process Engineer/Designer)
- Ezechiele Mambreani (Mechanical Engineer/Designer)

Environmental and Safety Team:

- Nikoloz Nephariidze (Environment Specialist)
- Irakli Abuladze (Health&Safety Officer)
- Goran Milojevic (Surveyor)

Fig 1: Organization Chart of REG-03/a - Zugdidi WWTP project



33. Progress of construction activities under REG-03/a project during the reporting period is presented in the Table 3 below.

Table 3: Construction progress REG-03a project

No.	Facility	Work Description
1	Inlet Chamber, CS, PS, FS	Lean Concrete for the FS and Inlet Chamber
2	Grit and Grease Removal Chamber	Concreting of the middle walls - Part II
3	Primary Sedimentation Tank	Lean Concrete
4	Biological Tank	Walls - SW Corner Foundation - Part II - 2/5 Foundation - Part III - 3/5 Walls - South - 2nd and 4th part Walls - South - 1st part Foundation - Part IV - 4/5 Walls - South - 3rd and 5th part
5	Final Sedimentation Tank	Lean Concrete of the lowest part Foundation of the lowest part
6	Dewatering Building	Concreting of the lowest part walls for the reservoir
7	Sludge Digester	Reinforcement Foundation
8	Drain Pumping Station	Walls - 3/4
9	Operation Building	Reinforcement works for the Columns Outer columns

No.	Facility	Work Description
		Lower part of the beams Upper slab
10	Administration Building	Inner Columns Outer Columns The rest of the Columns Lower part of the beams Lintels
11	Garage and Workshop	Columns
12	Inlet Chamber, CS, PS, FS	Lean Concrete for the FS and Inlet Chamber

2.4 Description of Any Changes to Project Design

N/A

2.5 Description of Any Changes to Agreed Construction methods

N/A

III. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

34. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis, during the period July-December 2018. Also unscheduled monitoring visits were carried out, on-site verbal instructions have been given to the contractor and its environmental team and non-conformance 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.
35. The monitoring activities included:
 - The monitoring of compliance of construction activities under Zug-02 project sites to the IEE/EMP requirements;
 - The monitoring of mobilization activities under Reg-03/a project sites to the overall project EMP/SSEMP requirements.
36. Environmental Monitoring Specialist hired under the ZUG-02 and Reg-03/a projects Mr.Nikoloz Meparidze conducted the day-to-day monitoring of the construction sites, filled the weekly checklist forms (example is provided in Annex D) developed the monthly monitoring reports and submitted to SC/Posch.
37. Environmental Monitoring Specialist, Ms.Tinatin Zhizhiashvili developed quarterly monitoring reports for UWSCG/USIIP based on the monthly reports submitted by Contractor, and on regular site inspections.
38. ES of USIIP performed monitoring of contractor's performance with the approved EMPs and SSEMPs, environmental standards and other environmental commitments of the contractor. ES developed Semi-annual and annual environmental monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
39. The construction activities affecting the environment during the reporting period are as follows:
 - Excavation works
 - Removal of Surplus Soil
 - Backfilling of Trenches
 - Reinstatement Activities
40. In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, noise and socio-cultural resources. Accordingly, the monitoring guidelines were set as shown in the Table 4 below.

Table 4: Parametric Measurement Guidelines

Parameters	Frequency & Location	Remarks
Zug-02		
Air Quality	Air Quality Every 3 months Networks,	Watering site during excavation works to avoid dust spreading Conduct measurements of Dusts Mg/m ³ ; CO Mg/m ³ ; NO ₂ Mg/m ³ ; SO ₂ Mg/m ³
Noise	Noise, Every 3 months Sewerage Networks,	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Incorrect surplus/waste soil management	Monthly during the site Inspection and audit	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 special disposal place identified by Municipality
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.
REG-03/a		
Air Quality	Air Quality Every 3 months Zugdidi WWTP	Watering site during excavation works to avoid

Parameters	Frequency & Location	Remarks
	construction site	dust spreading Conduct measurements of Dusts Mg/m ³ ; CO Mg/m ³ ; NO ₂ Mg/m ³ ; SO ₂ Mg/m ³
Noise	Noise, Every 3 months Zugdidi WWTP construction site	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Incorrect surplus/waste soil management	Monthly during the site Inspection and audit	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 special disposal place identified by Municipality
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.

3.2 Site Audit

41. Regular inspection and monitoring of construction sites under ZUG-02 and REG-03/a sub-projects were conducted by ESs of USIIP and Posch. The schedule of Joint inspection and summary of audits carried out under sub-projects are provided in the Table 5 below.

Table 5. Summary of site audits

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
Continuously during reporting period (July-December 2018)	Ludwig Pfeiffer Hoch-und Tiefbau GmbH & Co.KG ZUG-02	Environmental, H&S Specialist of Contractor Mr. Nikoloz Nepridze	Day to day monitoring of sites Compliance with Environmental and HES requirements	1. Poor housekeeping 2. Safety issues on construction sites	Develop Weekly Checklists (Annex D) Prepare Monthly Monitoring Reports
02.07.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili Environmental, H&S Specialist of Contractor Mr. Nikoloz Neparidze	Compliance with EH&S requirements	1. Poor housekeeping 2. Power generator without secondary containment 3. Construction materials improper storage	Verbal Instructions given to contractors to improve the situation on sites Quarterly Reports Prepared by SC
31.07.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	Safety signs/tapes around of all open trenches should be installed to avoid accident of workers and population Workers always should use complete PPE	Verbal Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
14-16 08.2018		Environmental	Monthly monitoring of	Walls of the deep	Verbal

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
		Specialist of SC Ms. Tiko Zhizhiashvili	sites	trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents	Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
22.08.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili Environmental Specialist of CC Mr.Nikoloz Neparidze Environmental Specialist of USIIP Ms. Ketevan Chomakhidze Mr. Hristo Grozdev, team Leader of SC/Posch	Monthly monitoring of sites	Safety signs/tapes around of all open trenches should be installed to avoid accident of population and workers. Construction activities information signs should be installed at each construction segment Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents Surplus waste soil should be removed and disposed in a proper place Construction materials should be brought when needed to avoid its	Non-Conformance Notice Issued (example is provided in Annex c) Non-Conformance letter issued by Mr. Hristo Grozdev/SC to contractor (see Annex c)

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
				<p>long time disposal in the streets and disturbance of residents and businesses</p> <p>Trench crossing bridges should be installed at the perimeter of open trenches. Proper access of the house entrances should be ensured</p>	
25.08.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	<p>Construction activities information signs should be installed at each construction segment</p> <p>Workers always should use complete PPE</p>	<p>Verbal Instructions given to contractor</p> <p>Quarterly Environmental Monitoring Report Prepared</p>
10.09.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	<p>Safety signs/tapes around of all open trenches should be installed to avoid accident of population</p> <p>Workers always should use complete PPE</p>	<p>Verbal Instructions given to contractor</p> <p>Quarterly Environmental Monitoring Report Prepared</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
22.09.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	Trench crossing bridges should be installed at the perimeter of open trenches. Proper access of the house entrances should be ensured	Verbal Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
12.10.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili Environmental Specialist of USIIP Ms. Ketevan Chomakhidze	Monthly monitoring of sites	Construction activities information signs should be installed at each construction segment Workers always should use complete PPE	Verbal Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
19.11.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid leakage and ground/water pollution.	Verbal Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
14.11.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Compliance with EH&S requirements	1. Poor housekeeping 2. Safety issues on construction sites	Quarterly Reports Prepared by SC

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
		Environmental Specialist of CC Mr. Nikoloz Neparidze Environmental Specialist of USIIP Ms. Ketevan Chomakhidze		(gas cylinder improper usage, electrical equipment safe usage norms violation)	
Continuously during reporting period (July-December 2018)	JV "Pfeiffer - EMIT" REG-03/a	Environmental, H&S Specialist of Contractor Mr. Nikoloz Neparidze	Day to day monitoring of sites Compliance with Environmental and HES requirements	Workers always should use complete PPE	Monthly Monitoring Reports
02.07.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili Environmental Specialist of CC Mr. Nikoloz Neparidze Environmental Specialist of USIIP Ms. Ketevan Chomakhidze	Compliance with EH&S requirements	1. Poor housekeeping 2. Power generator without secondary containment 3. Construction materials improper storage 4. Lubricant drums outdoor storage	Quarterly Environmental Monitoring Report Prepared by SC Semi-annual EMR prepared by ES of USIIP
31.07.2018		Environmental	Monthly monitoring of	Equipment & vehicles used for	Verbal

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
		Specialist of SC Ms. Tiko Zhizhiashvili	sites	construction activities should be in good condition (no leakage) to avoid leakage and ground/water	Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
14-16 08.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	There should be a dedicated sheltered space for hazardous waste arranged. There should be 2 containers placed; one for hazardous solid waste (oily rags, gloves, etc.), and one for oil-spoiled ground. The containers should be labeled;	Verbal Instructions given to contractor Quarterly Environmental Monitoring Report Prepared
22-25 August, 2018		Environmental specialists of USIIP Ms.Ketevan Chomakhidze	Monthly monitoring of construction sites	Workers always should use complete PPE	Contractor is given verbal instructions to improve the situation
05-06 September 2018		Environmental specialists of USIIP Ms.Ketevan Chomakhidze	Monthly monitoring of construction sites	Removal and transportation of cut trees on site Equipment & vehicles used for construction activities should be in good condition (no leakage) to avoid	Contractor is given verbal instructions to improve the situation

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
				leakage and ground/water contamination	
25.08.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the construction site	Contractor is given verbal instructions to improve the situation
10.09.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	The topsoil issue has not been still decided; it should be agreed with Water Company whether the topsoil should be delivered to site;	Contractor is given verbal instructions to improve the situation
22.09.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	During previous visits, a certain part of soil was contaminated with car oils, which should have been removed, stockpiled and managed in accordance with requirements stated by the law.	Contractor is given verbal instructions to improve the situation
6.10.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	There are no respective containers for hazardous waste. There should be a dedicated sheltered space for hazardous	Non-Conformance Letter Issued to contractor (example is provided in Annex c)

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
				<p>waste arranged. There should be 2 containers placed; one for hazardous solid waste (oily rags, gloves, etc.), and one for oil-spoiled ground. The containers should be labeled;</p> <p>A company which will remove hazardous waste from the site has not been found. Therefore, a company with the relevant permit to remove hazardous waste should be found which will ensure periodic removal and neutralization of hazardous waste from the site;</p> <p>Both entrance gates to site are open and unauthorized people can free enter the site. In addition, the cattle freely moves within the site (such event was observed even during the visit);</p> <p>The generator next to the office still lacks a sump, which would ensure the collection of spilled materials in case of</p>	

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
				<p>emergency. The same place hosts construction materials and cars of company's employees, while the parking lot is arranged behind the office;</p> <p>The heavy machinery moves on the soil without gravel on site and it moves in the city with muddy wheels.</p> <p>The access roads should be graveled and car wash should be arranged, which will ensure the washing of the wheels before the machinery leaves the site;</p> <p>Besides the pit, which is dug for treatment plant, there is another deep pit in a form of upside down funnel (the ground is deprived of bottom from inside).</p> <p>The heavy machinery goes down to the pit. At the top of the pit, namely next to it, a road without gravel is arranged for</p>	

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
				<p>heavy machinery. This fact poses threat both for personnel working in the pit and employed on site, and for vehicles, which move around the road arranged next to pit.</p> <p>There is a danger of ground collapsing.</p> <p>The information provided in weekly reports (submittals) does not correspond to truth (for e.g. the reports say that a contractor for hazardous waste is not necessary; hazardous waste is not generated and containers are not necessary);</p> <p>There is no visitors' log being kept on site. The log about safety instructions is not filled in and signed by those who are trained in safety measures.</p>	
14.11.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili,	Monthly monitoring of sites	Both entrance gates to site are open and unauthorized people can free enter the site. In addition, the cattle freely moves	Quarterly monitoring report prepared by SC

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
		Environmental Specialist of CC Mr. Nikoloz Neparidze Environmental Specialist of USIIP Ms. Ketevan Chomakhidze		within the site (such event was observed even during the visit); Completed	
18-20 October 2018		RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketevan Dgebuadze. Environmental specialists of USIIP Ms. Ketevan Chomakhidze Environmental monitoring specialists of SC/Posch	Annual Monitoring of sites	CC to improve track record system and add Accident Record Log (with recorded near misses) and grievance log book. Partially Completed CC to place all waste containers at special designated area with concrete base and provide roofing. In addition, for hazardous waste containers secondary drip tray have to be used. Agreement have to be signed with licensed company for disposal of hazardous waste till	Missions of Note issued by RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketevan Dgebuadze. Note: During the reporting period, no accident were recorded, near missis were reflected in quarterly monitoring reports prepared by SC

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
		Ms.Tiko Zhizhiashvili		<p>15th of November 2018.</p> <p>Completed</p> <p>CC to construct car washing and refueling areas till the end of December 2018.</p> <p>Completed</p> <p>CC to obtain permit from MOEPA for concrete batching plant in Q4, 2018.</p> <p>Completed¹</p> <p>CC to place the diesel-generator on the secondary tank. The volume of the secondary tank must be at least 110% of the generator diesel capacity.</p> <p>Partially Completed</p>	since no, no near miss forms have been filed
27.11.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili	Monthly monitoring of sites	1. Poor housekeeping	Quarterly report develop by SC

¹ An Inventory Report on emissions of harmful substances into the air from the Zugdidi batching plant was prepared and submitted to the MoEPA in accordance with the national regulations.

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	
10.12.2018		Environmental Specialist of SC Ms. Tiko Zhizhiashvili Environmental Specialist of USIIP Ms. Kate Chomakhidze	Monthly monitoring of sites		Quarterly report develop by SC Semi-annual EMR prepared by ES of USIIP

3.3 Issues Tracking (Based on Non-Conformance Notices)

42. Non-Conformances have been observed during the site visits under ZUG-02 and REG-03/a sub-projects. The contractors were always informed on the detected non-conformances and were demanded to improve on the deadline set and send photos of improvements. Environmental team of Posch and UWSCG/USIIP monitored the improvements during the next monitoring visits. All Non-conformance Notices issued during the reporting period is presented in ANNEX C of this Semi-Annual EMR.
43. A summary of the identified environmental issues for July-December 2018 is presented in table 6 below.

Table 6: Summary of Issues Tracking Activity for Current Period

Total Number of Issues for Project	6
Issues Opened This Reporting Period	2
Issues Closed This Reporting Period	4
Percentage Closed	66%

Summary Table REG-03/a

Total Number of Issues for Project	15
Issues Opened This Reporting Period	8
Issues Closed This Reporting Period	7
Percentage Closed	70%

3.4 Trends

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

Table 7: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
1 January-June 2018	30	60%	40%
2 July-December 2018	20	68%	32%

45. All major Non-Conformances under USIIP/T5 during the reporting period are provided in an Annex C of this report.

3.4 Unanticipated Environmental Impacts or Risks

N/A

IV. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

46. During the reporting period Environmental measurements of Noise level and ambient air Quality were carried out by contractor under Zug-02 and REG-03/a sub-projects.
47. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 7 and 8 below.

Table 7: Noise Level Guidelines

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

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

Table 8: Air pollution Guidelines

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

48. Monitoring measurements of noise level and ambient air quality under Zug-02 project was conducted by contractor in the nearest sensitive receptors in December 2018 (See Table 9 and Annex A). Location and data are included in the table below. The next monitoring measurements will be conducted in May 2019 and results will be reflected in the next January-June EMR 2019.

49. According to data received in December 2018 noise level exceed the standards of the National Regulations and World Health Organization (IFC/WHO),1999 in Zugdidi (Kostava street in Zugdidi) and therefore additional mitigation measures are required (Please see Table11: Recommendations to Address Environmental Issues under Zug-02 and REG-03/a sub-projects). IFC/WHO standards for Noise and Air pollution are presented in Tables 7 and 8 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted

during the daytime from 13:00 pm to 17:00 pm and no complaints were received from the local population about the noise during the reporting period.

Table 9: Environmental Quality Measurements Data, ZUG-02

Plaice of measurement	Dust Mg/m ³		CO Mg/m ³		No ₂ Mg/m ³		SO ₂ Mg/m ³		Noise db		Radiation mR/h		Vibro-acceleration m/sek	
	standard	result	standard	result	standard	result	standard	result	standard	result	standard	result	standard	result
Zug-02														
Rustaveli Street 42°30'23.52" N 41°51'16.18" E	0.5	PM10-0.21 PM25-0.33	5.0	1.3	0.2	0.02	0.5	≥ 0.1	70	56.6	30	12	4.0	2.4
Kostava street 42°30'22.36" N 41°52'8.93" E		PM10-0.07 PM25-0.17		1.7		0.03		≥ 0.1		60.3		10		2.1

50. Monitoring measurements of noise level and ambient air quality under REG-03a project was conducted by the National Environmental Agency under the MEPA in the construction area in September 27, 2018 (See Table 10 and Annex A). Location and data are included in the table below. The next monitoring measurements will be conducted in May 2019 and results will be reflected in the next January-June EMR 2019.
51. According to data received in June 2018 noise level does not exceed the standards required by National Regulations and World Health Organization (IFC/WHO),1999, and therefore no additional measures are required. IFC/WHO standards for Noise and Air pollution are presented in Table 7 and 8 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 15:00pm to 16:30pm and no complaints were received from the local population about the noise during the reporting period

Table 10: Monitoring Measurement of Noise and Air Quality, Reg-03/a

N	Place of measurement	Coordinates	Results				
			Dusts Mg/m3	CO Mg/m3	NO2 Mg/m3	SO2 Mg/m3	Noise db
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	55 Residential; Institutional; Educational 70 Industrial; commercial
1	Zugdidi X42.492082 ⁰ Y 41.842830 ⁰		0.068	0.56	0.003	<0.1	50.1

4.2 Trends

52. All mitigation measures identified within the ZUG-02 and REG-03/a projects are effective and no additional measures are required.

4.3 Summary of Monitoring outcomes

53. Noise level during the construction period under ZUG-02 exceeds the existing standards of IFC/WHO and therefore additional mitigations are required. The parameters of the ambient air quality is within the existing norms. The additional mitigations measures are provided in table 11 below. Noise level under the REG-03/a sub-project does not exceeds the existing standards and therefore additional measurements are required. SC and UWSCG/USIIP will monitor the improvements under Zug-02 sub-project and reflect findings in the next Semi-annual EMR in January-June 2019.

4.4 Material resources Utilization

4.4.1 Current Period

54. Despite the numerous requests from UWSCG to contractors and the supervision consultant to provide information on material resources used during the reporting period by contractors, no information was provided on the use of water resources, electricity, etc. The UWSCG will hold

additional meetings and discussion with contractors and SC and will ensure to get the necessary information by the end of June 2019 and this information will be reflected in the next Semi-annual EMR in January-June 2019.

4.4.2 Cumulative Resources Utilization

N/A

4.5 Waste Management

4.5.1 Current Period

- 55.** Despite numerous requests from UWSCG / USIIP to contractors and SC/Posch to provide information on the amount of waste generated during the reporting period, the contractor did not provide any information on this issue. UWSCG will hold additional meetings / trainings with contractors and SC to obtain the requested information in accordance with the new manual developed by ADB. The improvement will be described in the next semi-annual EMR in January-June 2019.
- 56.** At the construction sites there are mainly produced household, construction (inert, surplus soil) and hazardous waste. Despite the request from UWSCG to contractors and SC to provide quantity of produced waste during the construction in accordance with the requirements of the new Semi-annual EMR format, the contractor did not provide any information on this issue.
- 57.** Mainly household waste is collected in municipal containers which are served by the local cleaning service. There is need of routine organization and cleaning of sites. Contractors always have separate containers for household and hazardous waste with proper labelling at the construction site.
- 58.** In most cases waste/surplus soil is removed from the construction site for further use in agreement with municipality or it stays at the construction site for its future use.
- 59.** The construction waste that is allocated at the construction site is removed for its final disposal that is managed by formal agreement with local municipality or Ltd "Solid Waste Management Company".
- 60.** Hazardous waste (lubricant residues and etc) were stored according to all the safety norms after the strong instruction given by SC and UWSCG. In the case of formation such kind of waste, contractor has to write to the management of the municipality or the company who is licensed to recycle/decontaminate such kind of waste. Also contractors have special container with proper labelling at the construction site.

4.5.2 Cumulative Waste Generation

N/A

4.6 Health and Safety

4.6.1 Community Health and Safety

- 61.** No community incidents have been reported to SC during reporting period under ZUG-02 and Reg-03a sub-projects.

4.6.2 Worker Safety and Health

ZUG-02

62. Environmental H&S Manager of ZUG-02 project Mr. Nikoloz Neparidze was performing every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/POSCH and providing relevant reports on a regular basis taking into account any recommendations given by SC/UWSCG engineers.
63. Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Manual works;
 - Upgrade Safety Hard and Warning Barricade
64. Contractor under ZUG-02 project was working on compilation of statistics information (incidents, near misses, trainings) during reporting period. No workers incidents have been reported during reporting period under ZUG-02 project.
65. The following Near-Misses were reported by SC under ZUG-02 project, which may be resulted in Workers' Health and Safety problems:
- Gas and water supply pipes are been further cut in many occasions. Trench protection equipment insufficient on site, residents and labour exposed to high risk.
 - The Contractor should erect secure robust safety barriers around all open excavations.
66. During the reporting period, within the framework of the ZUG-02 sub-project, no near-misses forms have been filed. SC and UWSCG / USIIP requested from contractor to adequately fill the near-misses forms and reflect in their monthly monitoring reports.

REG-03/a

67. Environmental H&S Managers of ZUG-03/a sub-project Mr. Nikoloz Neparidze and Irakli Abuladze were performing every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/Posch and providing relevant reports on a regular basis taking into account any recommendations given by SC/UWSCG engineers.
68. Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Housekeeping;
 - Reinforcement;
 - Ground works;
 - Manual works;
 - Removal waste;
 - Bending rebar, Cutting;

- Installation and dismantle formwork
- Induction all visitors
- Dust and Noise Measurements
- Upgrade Safety Hard and Warning Barricade

69. Contractor under ZUG-03/a project was working on compilation of statistics information (incidents, near misses, trainings) during reporting period. No workers incidents have been reported during reporting period under ZUG-03/a project.

70. The following Near-Misses were reported by SC under ZUG-02 project, which may be resulted in Workers' Health and Safety problems:

- Single row of plastic security tape acting as a fence which is inadequate and ineffective. In addition, no night warning lamps are being used for the open trenches.
- On the wooden material there were nails which could damage workers during construction activities. In accordance with the instructions given to workers by EH&S Specialist of contractor, wooden materials were cleaned from nails
- Special equipment during working at heights should be used
- Ladder safety should be insured

71. During the reporting period, within the framework of the REG-03/a subproject, no incidents with workers were registered. No near-misses forms were filled under REG-03/a subproject as well. SC and UWSCG / USIIP requested from contractor to adequately fill the near misses forms and reflect in their monthly monitoring reports.

4.7 Training

72. Routine personnel trainings and toolbox talks happen by the construction companies almost on daily basis under REG-03/a sub-projects. The recording of such toolbox talks are available at the sites. SC also provides routine instructions and verbal trainings for Construction Company environmental and H&S officers. Statistics of routine toolbox talks will be communicated by the construction companies during next reporting period.

V. FUNCTIONING OF THE SEMP

5.1 SEMP Review

73. SSEMP for Zugdidi WWTP under Reg-03/a project was prepared by Contractor, endorsed by SC and approved by UWSCG in 13 March 2018. SSEMP was reviewed/commented by the RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Keti Dgebuadze.

74. No SEMP's have been prepared under Zug-02 project, since all construction activities are going on already inhabited area and no damage will be caused to the environment.

VI. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

N/A

6.2 Opportunities for Improvement

N/A

VII. SUMMARY AND RECOMMENDATIONS

7.1 Summary

- 75.** During the reported period construction activities were implemented under ZUG-02 and REG-03/a sub-projects. Contractors have intensified all activities to improve the progress of the works on sites. Individual and Joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of Posch and UWSCG/USIIP on a regular basis.
- 76.** Day-to-day monitoring of the construction sites were carried out by the environmental Specialists of Contractor, monthly monitoring reports were developed and sent to Supervision Consultant.
- 77.** Environmental Monitoring Specialist of Posch, Ms. Tiko Zhizhiashvili conducted monthly monitoring of project sites under T5 and developed Non-Conformance Notice were required. She also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.
- 78.** The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under ZUG-02 and REG-03/a sub-projects.
- 79.** Environmental Specialist of USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMP, and other environmental commitments of the contractor. USIIP/ES developed Semi-annual monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and results of monitoring of construction sites.
- 80.** Also unscheduled monitoring visits were carried out and Non-Conformance Notice has been issued to the contractor by the environmental specialist of UWSCG/USIIP if needed. Mitigation measures in order to reduce major environmental impacts have been instructed to CCs during the monitoring visits as well.
- 81.** In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, noise and socio-cultural resources.
- 82.** Noise level exceeded the existing standards of national and international regulations only under ZUG-02 sub-project. Additional mitigation measures to improve the situation is provided in the Table 11 below.

7.2 Recommendations

- 83.** The following activities are recommended for the next reporting period:
- 84.** During the reporting period, from July to December 2018, the T5 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.
- 85.** More detailed recommendations for the implementation of T5 during the next reporting period January-June 2019 are provided in the table 11 below:

Table 11: Recommendations to Address Environmental Issues under ZUG-02 and REG-03/a sub-projects

Recommendations ZUG-02 and REG-03/a sub-projects	
Recommendations ZUG-02	Implementation status and date
Poti Network	
Safety signs/tapes around of all open trenches should be installed to avoid accident of population	The contractor is given a strong instruction to improve the situation by the mid. January 2019 and constantly maintain an improved standard.
All workers should wear PPE especially safety shoes.	
Noise from the construction activities should not cause disruption and nuisance to nearby community and other sensitive receptors (i.e. school, hospitals).	<p>Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the January 2019:</p> <p>Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance;</p> <p>Noisy construction activities will be avoided during night time;</p> <p>All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions;</p> <p>Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e. temples, hospitals, schools, houses)</p>

Recommendations ZUG-02 and REG-03/a sub-projects	
	<p>Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise.</p> <p>Conduct meetings with population and provide information related to schedule of construction activities and noise caused by the project activities.</p>
ZUG-03/a	
CC to improve track record system and add IEE, Accident Record Log (with recorded near misses), and records of all trainings.	Will be established by the end of January 2019
A company which will remove hazardous waste from the site has not been found. Therefore, a company with the relevant permit to remove hazardous waste should be found which will ensure periodic removal and neutralization of hazardous waste from the site.	The contractor was given strong instructions to immediately remedy the situation, but by the end of December 2018 it was not fully improved.
CC to place the diesel-generator on the secondary tank. The volume of the secondary tank must be at least 110% of the generator diesel capacity.	The new deadline for improvement is January 2019.
During previous visits, a certain part of soil was contaminated with car oils, which should have been removed, stockpiled and managed in accordance with requirements stated by the law. This waste is neither currently placed on site nor removed by a company with a permit. Management of hazardous waste with such methods is impermissible; Waste Management Code of Georgia sets fines;	

86. Conduct monitoring of Ambient Noise and Air quality under ZUG-02 project at the nearest sensitive receptors in May 2019.

Table 12: Conduct Monitoring of Environmental Quality under Zug-02 project

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

87. Conduct monitoring of Ambient Noise and Air quality under REG-03/a project at the nearest sensitive receptors in May 2019.

Table 13: Conduct Monitoring of Environmental Quality under REG-03/a project

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

ANNEX A: MEASUREMENT DATA

REG-03/a

საგარეო საზღვარსა და გარემოსდაცვითი რესურსების დაცვის სამინისტრო
 MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES PROTECTION OF GEORGIA

 **საქართველოს ეკოლოგიური სააგენტო**
 NATIONAL ENVIRONMENTAL AGENCY

-12/1-642 27 09 2018

მას "ლედეოზ-ბელოვარის მონივრე ტოვებზე და კოკის წარმომადგენლობის სატროველომ"-ს დაბრუნების ტ-6 შედეგის სტრუქტურა

კალაბაქონის პედეტი

საქართველოსგარეშისა და მდებრივი რესურსების დაცვის სამინისტროს სასაბ-
 კარნოს პროექტის სააგენტო"-სა და მას "ლედეოზ-ბელოვარის მონივრე ტოვებზე და კოკის-
 წარმომადგენლობის სატროველომ"-ს შორის 2017 წლის 25 მარტის გადამხმებული ფასიანი
 მომსახურების შესახებ ფ-3-416 ხელშეკრულების თანახმად, კარგელი - ქ. ზუგდიდისა და
 და ქ. ფოთში, თქვენს მხერ მოითხოვლულ ატმოსფერული ჰაერის ხამ წერტილებში - ხსნაფრის,
 ხანძარის დოვებდვის, აზოტის დოვებდვის, მტვერისა და კარგარგვის დოვებდვის
 შედეგდლომის გაზომვის შედეგებს

შეტვისდებოთ:

სააგენტოს უფროსი  თამარ მანგაბია



Concentration of harmful substances in atmospheric.

Sample place Coordinates	Noise dB	Dust mg/m ³	Sulfur dioxide SO ₂ mg/m ³	Nitrogen dioxide NO ₂ mg/m ³	Carbon oxide CO mg/m ³
Puti X 42.232930° Y 41.637544°	55.2	0.052	<0.1	0.003	0.55
Zugdidi X 42.492082° Y 41.842830°	59.1	0.068	<0.1	0.003	0.56

Executors:
 Main specialist
 Main specialist
 specialist

Agreed:
 Head Environmental Pollution
 Monitoring Department / 

O. Kenia 
 G. Khachidze
 G. Mogsotia

M. Arabidze

ZUG-02 – Network

Annex 1: Results of quality measurements in Zugdidi



Annex 1: Results of quality measurements in Zugdidi

Place of measurement	Dust Mg/m ³		CO Mg/m ³		NO _x Mg/m ³		SO ₂ Mg/m ³		Noise db	Radiation mR/h		Vibro- acceleration m/s ²		
	standard	result	standard	result	standard	result	standard	result		standard	result	standard	result	
Rustaveli street 42°30'23.52"N 41°51'16.18"E	0.5	PM _{2.5} -0.21 PM ₁₀ -0.93	5.0	1.3	0.1	0.02	0.5	±0.1	20	56.8	30	12	4.0	2.4
Kostava street 42°30'22.36"N 41°52'8.93"E		PM _{2.5} -0.07 PM ₁₀ -0.17		1.7		0.03		±0.1		50.3		10		2.1

Zarab Revashvili
Project Coordinator
Ltd "Eco-Spectra"

Z. Revashvili



ANNEX B: PROJECT PHOTOS

Photos of Zug-02 project - Rehabilitation of Sewerage Network in Zugdidi





Photos of Reg-03/a project – Construction of Zugdidi WWTP





ANNEX C: NON-CONFORMANCE NOTICES

Zug-02

Non-Compliance Notice

<p>Project: USIIP</p>	<p>Non-compliance Notice Zugdidi</p>
<p>Contract No: Zug-02</p>	
<p>Reference: Zugdidi – Camp site and networks</p>	
<p>This notice is to advise you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently.</p>	
<p>Safety signs/tapes around of all open trenches should be installed to avoid accident of population</p> <p>Construction activities information signs should be installed at each construction segment</p> <p>Walls of the deep trenches (>1.5m) are not strengthened by boards to avoid landfall of the soil and accidents</p> <p>Surplus waste soil should be removed and disposed in a proper place</p> <p>Trench crossing bridges should be installed at the perimeter of open trenches. Proper access of the house entrances should be ensured</p> <p>Workers always should use complete PPE</p> <p>All network construction segments should be cleaned/well organized on regular bases</p> <p>Photos of existing problems with protective barriers on sites for residents and cattle</p>	
	
<p>September 2018. Kate Chomakhidze, ES of USIIP</p>	

Cc
UWSCG Head Office
Ekaterine Galdava, Director
76b Vazha-Phshavela Ave.
Tbilisi, 0186 Georgia

Zugdidi, 24 August 2018
Our Ref: ENG_ZUG-02_263_20180624

CONSTRUCTION SUPERVISION (USIIP TRANCHE 5): ZUGDIDI AND MESTIA
UWSCG/USIIP/QCBS/03-2016

Contract: ZUG-02 – Construction of Sewage System in Zugdidi

SUBJECT: ENGINEERS INSTRUCTION TO PROVIDE CLARIFICATION

Dear Mr. Djordjevic,

There are six RFIs received within these two days after the Notice to Correct issued by the Engineer on 23rd Aug 2018 instructing you to correct the safety protection and quality of Works on all active sites.

The Engineer considers that the corrections are not performed as instructed due to inability of the Contractor to provide the required equipment and staff. However, the Contractor is insisting to open new sites without any action toward the instructed corrections.

You are here instructed to provide the position of the Contractor pon the above situation.

Yours sincerely

USIIP TRANCHE 5
Hristo Grozdev
THE ENGINEER
POSCH&PARTNERS + HYDRO-ING
Hristo Grozdev
Chief Resident Engineer

შპს "სანაპირების ასოციაციისთვის"
სანაპირების ასოციაცია
სტრ. № 1/22793
27.08.18

Page 1 of 2



Non-Conformance Letter

**To Team Leader of EC/Posch and
Contractor under REG-03/a sub-project,
Prepared by Tiko Zhizhiashvili:**

Dear Colleagues,

As you know, on October 4 I was in Zugdidi WWTP site. The situation on the construction site does not compliance the environmental requirements. Here are some of the major issues that I think need to be improved immediately:

- There are no respective containers for hazardous waste. There should be a dedicated sheltered space for hazardous waste arranged. There should be 2 containers placed; one for hazardous solid waste (oily rags, gloves, etc.), and one for oil-spoiled ground. The containers should be labeled;
- A company which will remove hazardous waste from the site has not been found. Therefore, a company with the relevant permit to remove hazardous waste should be found which will ensure periodic removal and neutralization of hazardous waste from the site;
- During previous visits, a certain part of soil was contaminated with car oils, which should have been removed, stockpiled and managed in accordance with requirements stated by the law. This waste is neither currently placed on site nor removed by a company with a permit. Management of hazardous waste with such methods is impermissible; Waste Management Code of Georgia sets fines;
- Both entrance gates to site are open and unauthorized people can free enter the site. In addition, the cattle freely moves within the site (such event was observed even during the visit);
- The generator next to the office still lacks a sump, which would ensure the collection of spilled materials in case of emergency. The same place hosts construction materials and cars of company's employees, while the parking lot is arranged behind the office;
- The heavy machinery moves on the soil without gravel on site and it moves in the city with muddy wheels. The access roads should be graveled and car wash should be arranged, which will ensure the washing of the wheels before the machinery leaves the site;
- Besides the pit, which is dug for treatment plant, there is another deep pit in a form of upside down funnel (the ground is deprived of bottom from inside). The heavy machinery goes down to the pit. At the top of the pit, namely next to it, a road without gravel is arranged for heavy machinery. This fact poses threat both for personnel working in the pit and employed on site, and for vehicles, which move around the road arranged next to pit. There is a danger of ground collapsing; I could not determine why the pit was arranged;
- The topsoil issue has not been still decided; it should be agreed with Water Company whether the topsoil should be delivered to site;
- The information provided in weekly reports (submittals) does not correspond to truth (for e.g. the reports say that a contractor for hazardous waste is not necessary; hazardous waste is not generated and containers are not necessary);
- There is no visitors' log being kept on site. The log about safety instructions is not filled in and signed by those who are trained in safety measures (are trainings held at all?).

Sincerely,

Tiko Zhizhiashvili

Environmental Specialist, Posch

Annex D: Weekly Monitoring Checklists, Zug-02

ყოველკვირეული გარემოსდაცვითი მონიტორინგის რეპორტი Weekly Environmental Monitoring Report

Place: Zugdidi

Reporting period from 07 September - 13 September 2018

Name of the Contractor and project number/lot მშენებელი კონტრაქტორის სახელი და პროექტის/ლოტის ნომერი	Ludwig Pfeiffer Hoch- und Tiefbau GmbH & Co.KG (Germany) CONSTRUCTION of a new wastewater treatment plant (WWTP) in Zugdidi (No: P43405-ICB-ZUG-02)
კონტრაქტის #: Contract #	No: P43405-ICB-ZUG-02
Description and location of the site სამშენებლო საიტის ადგილმდებარეობის აღწერა	The project area is located in Zugdidi, Georgia. პროექტი ხორციელდება ქ. ზუგდიდში, საქართველო
Name of the Employer / Implementing Agency განხორციელებელი სააგენტო	"United Water Supply Company of Georgia", LLC შპს "საქართველოს გაერთიანებული წყალმომარაგების კომპანია"
Name of the Engineer (name, last name, contact information and signature) სარეგულაციო კომპანიის წარმომადგენლის სახელი, გვარი, საკონტაქტო ინფორმაცია და ხელმოწერა	JV: Poshi & Partners Consulting Engineers Hydro Insaenure Consulting & Engineering შპს "პოში ენჯინერინგს პარტნერს პაიპარტი უინჯინერინგს".
Current Stage of Civil Works სამშენებლო სამუშაოების მიმდინარე სტატუსი	მასდინარე On-going
Weekly Weather Conditions კვირის ამინდის პირობები	Sunny/intermediate cloudy მზიანი/საშუალოდ ღრუბლიანი
Remarks შენიშვნა	

ობიექტის გარემოს დაცვას პასუხისმგებელი პირი (კონტრაქტორი). Staff responsible for environment/safety at the site (contractor)	სახელი: ირაკლი აბულაძე Name: Irakli Abuladze	ხელმოწერა/ Signature: 
გარემოს დაცვის სპეციალისტი (კონტრაქტორი) Environmental Specialist (contractor)	სახელი: Name: Nikoloz Nepharidze	ხელმოწერა/ Signature: 
კონტრაქტორის წარმომადგენელი Contractor's Representative	სახელი: Name: Nikola Marinko	ხელმოწერა/ Signature: 

N	Documents and Observations to be Reported შესამოწმებელი დოკუმენტები და ფაქტები	კი/ Yes	არა/ No	მიმდინარეობს/ Ongoing	შენიშვნა/ Comment
1	EMPs/SSEMPs, Protocols and Reports				
1.1	Contractor's Site-specific Environmental Management Plan (SSEMP) is prepared, reviewed and approved by Engineer prior to contractor commencing the works. შემუშავებული საიტ-სპეციფიკური გარემოსდაცვითი მართვის გეგმა, შემოწმებული და დამტკიცებულია ინჟინრების მიერ, სამშენებლო სამუშაოების დაწყებამდე.	X			(All documents requested by the NES (IEE, EMP, SSEMP, H&S plan, monitoring reports, checklists, licenses, permits, complaints log book, as well as records of trainings) were kept on camp including monitoring checklists of CC)
1.2	Contractor has Environmental supervisor in place. კონტრაქტორის დადებული აქვს ხელშეკრულება ადგილობრივ გარემოსდაცვითი საკითხების სუპერვიზორთან.	X			
1.3	Monthly environmental monitoring reports are prepared by the Contractor and submitted to the Supervision Consultant მომზადებულია გარემოსდაცვითი მართვის გეგმის განხორციელების ყოველთვიური ანგარიშები კონტრაქტორის მიერ და წარდგენილია კონსულტანტისათვის	X			
1.4	Health and Safety Management Plan is prepared and approved. შემუშავებული და მიღებულია ჯანდაცვისა და უსაფრთხოების მართვის გეგმა და ჯანდაცვისა და უსაფრთხოების მართვის სისტემა მშენებლობის ფაზისათვის.	X			
1.5	Complaints log book exists on site. საჩივრების ყურნალი/რეგისტრი არსებობს სამშენებლო საიტზე.	X			Complaints log book was kept at the camp site
1.6	Site Inspection NCR's (non-compliance reports) about Environmental issues were issued and corrective actions were implemented. შეუსაბამოების შეტყობინებების მომზადება და წარდგენა კონტრაქტორისათვის და მას კორექტირებელი ქმედებების განხორციელება.	X			
1.7	Training protocols about HSE are prepared and signed by employees. Records are kept on site. გაფორმებული და ხელმოწერილია მუშახელის ტრენინგის ოქმი ჯანდაცვისა და უსაფრთხოების საკითხებზე. ტრენინგის ანგარიშები მომზადებულია და ინახება კემპ-საიტზე.	X			
2	Permits, Licenses and Contracts				
2.1	The Contractor has a Permit from the Municipality or relevant contract for final disposal of excavation material/ კონტრაქტორს მიღებული აქვს ექსკავირებული ნარჩენი საბოლოო განთავსების ნებართვა ან შესაბამისი კონტრაქტი ადგილობრივ მუნიციპალიტეტთან.		X		
2.2	The Contractor has a permit for disposal of communal waste. კონტრაქტორს მიღებული აქვს საყოფაცხოვრებო ნარჩენების საბოლოო განთავსების ნებართვა.	X			
2.3	The Contractor has the contract with the licensed organization for the hand-over and disposal of hazardous waste. კონტრაქტორს გაფორმებული აქვს სახიფათო ნარჩენების გადაცემისა და გატანის ხელშეკრულება ლიცენზირებულ ორგანიზაციასთან.				There is no hazardous waste

3 Performance of civil works				
3.1	Adequate fencing of construction area from all sides სამშენებლო ტერიტორიის სრულად შემოღობვა	X		
3.2	Arrangement of lockable gate with standard warning and information signs საკეტანი შესასვლელი კარის მოწყობა, სტანდარტული გამაფრთხილებელი და საინფორმაციო ნიშნებით აღჭურვა	X		
3.3	Placement of standard warning and information signs at the perimeter and inside of construction area სამშენებლო ტერიტორიაზე და პერიმეტრზე სტანდარტული გამაფრთხილებელი და საინფორმაციო ნიშნების განთავსება	X		
3.4	Installation of safety signs/tapes and trench side barriers around of open trenches დიად დატოვებულ თხრილებზე და ჭებზე უსაფრთხოების ლენტების, ბარიერების და გამაფრთხილებელი ნიშნების განთავსება			X
3.5	Strengthening of walls of the deep trenches (>1.5m) by boards 1.5 მეტრზე მეტი სიღრმის ტრანშეებში კედლების გამაგრება			X
3.6	Removal of top soil (about 30 cm depth) and separately storing in appropriate place ექსკავაციის დროს, ნიადაგის ნაყოფიერი (დაახლოებით 20-30 სმ სისქის) ფენის მოხსნა და განცალკევებულად გროვებად შენახვა			There was no topsoil ჭუმუხოვანი ფენა არ ყოფილა
3.7	Provide adequate lighting of construction territory სამშენებლო ტერიტორიის დამის საათებში განათება	X		
3.8	Storing of construction materials/equipment is in accordance with environmental requirements სამშენებლო ტერიტორიის შესაბამისად მოწყობა მასალების და მოწყობილობების და დანადგარების ორგანიზებულად განთავსება (საჭიროებიდან გამომდინარე)			Not Applicable at this moment არ საჭიროებს ამ დროისათვის
3.9	Availability of proper fuel/oil spill response items (sand, sawdust, special containers) at the construction site სამშენებლო ტერიტორიაზე საწვავის და საპოხი მასალების დაღვრის შედეგების სალიკვიდაციო ნაკრების (ჭეიმა, ნახერხი, მდირე ზომის აუზი და სხვა) ხელმისაწვდომობა	X		
3.10	Allocation of fuel and lubricants containers at the special dedicated place (with roofing and concrete flooring) საწვავის და საპოხი მასალების კონტეინერების განთავსება მხოლოდ სპეციალურ გადახურულ ადგილებში	X		
3.11	Placement of proper Household Waste container at the special dedicated place with relevant indication signs (for example "Household Waste") სამშენებლო ტერიტორიაზე საყოფაცხოვრებო ნარჩენებისთვის თავსახურიანი კონტეინერის განთავსება და შესაბამისი წარწერებით აღჭურვა (მაგ. "HOUSEHOLD WASTE")	X		
3.12	Placement of proper Hazardous Waste container at the special dedicated places with relevant indication signs (for example "Hazardous Waste") სამშენებლო ტერიტორიაზე სახიფათო ნარჩენებისთვის თავსახურიანი კონტეინერის განთავსება და შესაბამისი წარწერებით აღჭურვა (მაგ. "HAZARDOUS WASTE")		X	
3.13	Arrangement of proper Parking area at the adequate place inside/outside of construction territory with relevant sign (for example P)	X		

	სამშენებლო ტერიტორიაზე ან მის გარეთ ტრანსპორტისთვის პარკირების ადგილის მოწყობა და ნიშნით აღჭურვა (მაგ., P)			
3.14	Use tarpaulins cover during materials transportation სამშენებლო მასალების და ნარჩენების ტრანსპორტირების დროს ავტოტრანსპორტის სპეციალური საფარით (შრეზუნტით, ტენტით და სხვა) აღჭურვა			Not Applicable at this moment არ საჭიროებს ამ დროისათვის
3.15	Ensure that all workers are provided with and use appropriate Personal Protective Equipment - helmets, hand gloves, boots, masks, safety belts მუშების და ინჟინერ-ტექნიკური პერსონალის მიერ ინდივიდუალური დაცვის საშუალებების (წაფხუტი, ყელბეჭტი, ხელთათმანი, ჩექმები, დამცავი სათვალე და სხვა) სრულად გამოყენება	X		One set is always on the place for visitors ერთი კომპლექტი ყოველთვისაა ადგილზე ვიზიტორებისთვის
3.16	Use of special safety equipment during working at heights/depth სიმაღლეზე/სიღრმეზე მუშაობის დროს სპეციალური დამცავი აღჭურვილობის გამოყენება			Not Applicable at this moment არ საჭიროებს ამ დროისათვის
3.17	Regularly cleaning of construction territory სამუშაო საიტების მუდმივ სამშენებლო ტერიტორიის მუდმივად დალაგება და დასუფთავება	X		
3.18	Washing construction site to avoid dust generation სამშენებლო ტერიტორიის მორწყვა, მტერისგან თავის აცილების მიზნით	X		
4 Monitoring Measurements				
4.1	Monitoring measurement data (air, water, soil, erosion, noise, dust, vibration, etc.). წყლის, ჰაერის, ვიბრაციის, ეროზიის, ხმაურის, მტერის და ნიადაგის მონაცემების გაზომვების მონიტორინგი.	X		
5 Top Soil Protection				
5.1	Topsoil is stripped and stored according to standard procedures and used further for landscaping and reinstatement. ნიადაგის ბიოკომპლექსიანი ფენის დაგვა			Not Applicable at this moment არ საჭიროებს ამ დროისათვის
6 Safety Measures				
6.1	The workers use all personal safety equipment required for individual technological processes (helmets, gloves, respirators, glasses, etc.). მუშახელი იყენებს ცალკეული ტექნოლოგიური პროცესებისათვის აუცილებელ პირად დამცავ საშუალებებს (წაფხუტები, ხელთათმანები, რესპირატორები, სათვალეები და ა.შ.).	X		
6.2	The sites are provided with the fire fighting and emergency medical aid kits, site is fenced, site lightning, signs are installed, etc. სამშენებლო ობიექტზე განთავსებულია ხანძარსაწინააღმდეგო და სასწრაფო სამედიცინო დახმარების საბაზისო ნაკრები. საიტი შემოღობილია, განათება დამონტაჟებულია, საინფორმაციო დოკუმენტი/აზრები გაკრულია და სხვ.	X		All necessary safety measures are organized უსაფრთხოების ყველანაირი ზომა მიღებული
6.3	Brief training about HSE and Environmental issues every morning ყოველდღე მოკლე ტრენინგი უსაფრთხოებისა და გარემოსდაცვით საკითხებზე	X		

