

Semi-annual Environmental Monitoring Report

Project Number: 43405-026

Reporting Period: January-June 2020

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM
(TRANCHE 4)
(FINANCED BY THE ASIAN DEVELOPMENT BANK)**

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

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

July 2020

Abbreviations

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

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I. INTRODUCTION

1.1. Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for “Urban Services Improvement Investment Program” (USIIP), Tranche 4 and describes the period of January-June 2020.
2. This report is the 9th Semi-Annual EMR for the T4 of USIIP.

1.2. Headline Information

3. Environmental and Social Compliance Audit Report was prepared under Variation Order #4 and Variation Order #8: Construction of additional Sewage Network Connections and Sewerage Pumping Stations of Anaklia-Ganmukhuri, under Zugdidi Water Supply System Improvement sub-project (ZUG-01), implemented under USIIP/Tranche 4. Main finding of the audit report is presented in paragraph 47 and the Audit report is presented in ANNEX G of this report.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1. Project Description

3. The Urban Services Improvement Investment Program was developed as the Government's response to the lack of adequate and/or safe water supply, sewerage and sanitation in urban areas of Georgia. This is intended to optimize social and economic development in selected urban areas through improved urban water and sanitation services, and is financed by the ADB through its Multi-tranche Financing Facility. The Ministry of Regional Development and Infrastructure is the Executing Agency and the "United Water Supply Company of Georgia", LLC is the Implementing Agency of the Investment Program. UWSCG is a 100% state-owned company.
4. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements will include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works will include sewer network, pumping stations, main collectors and waste water treatment plants.
5. Tranche 4 of the Investment Program includes:
 - a. Construction of Water Supply System in Zugdidi (Zug 01 - Contract No: P43405-ICB-Zug-01)
 - b. Construction of Sewerage System in Poti (Pot 01 - Contract No: P43405-ICB-Pot-01)
 - c. Construction of Wastewater Treatment Plant in Poti (Pot 02 -Contract No: P43405-ICB-Pot-02)
 - d. Construction of Water Supply System in Jvari (Jvari 02- Contract No: P43405-DC-Jvari-01)
 - e. Construction of Sewage Collection and Water Supply System in Gudauri (UWSCG-ICB-GUD-02-2028-GUD-02)
6. **Construction of Water Supply System in Zugdidi (ZUG 01).** The project comprises of the construction of 1 water supply pumping station – 1,170 m³, construction of new reservoirs (3,300 m³x3); distribution network - laying of approximately 220 km water supply pipelines; approximately 15 km transmission main; wells - drilling of 10 drinking water wells.
7. The contract ZUG-01 was signed on October 26, 2015 with AS Inshaat–N, LLC (Azerbaijan), the construction works were completed in September 2018 and further extended until June 2020 due to the additional construction works under VO#4 and VO#8: Construction of Additional Sewage Network Connections and Sewerage Pumping Stations of Anaklia.
8. VO#4 and VO#8 under the ZUG-01 sub-project include :
Connection of residential houses
 - Connection of residential houses in Ganmukhuri resort to main sewer line: l=11497m, n=359 houses;
 - Connection of residential houses in Anaklia resort to main sewer line: l=5778 m,

n=212 houses;

- Installation of pumps of previously constructed Pumping Stations with electrical connection and installation of automation cabinets for them – 20 pieces; Purchase and installation of pumps with automatics 4 pieces.
- Connection of two apartment buildings of the Ministry of Internal Affairs with self-flowing corrugated pipeline – d=200 mm, l=211.

Installation of Pump Stations

- Installation of # 22 Pump Stations (PS) and connection to existing pressure pipe (d=160 mm) for backflow to new Sewage Treatment Plant in Ganmukhuri.
- Installation of # 33 Pump Stations (PS); Arrangement of pressured pipeline (d= 355 mm, l= 1813m) and connection to existing l= 2400m same pipe; Arrangement ramp connection on the main channel with a steel casing pipe (d=630mm / 9mm, l= 21m) and 13 overpasses above the d=1m small drainpipes with a steel casing pipe (d=630mm / 9mm, l= 8m) in Anaklia.

Rehabilitation of Water Supply and Sewerage Distribution Network

- Installation of a new sewer pressure pipe (d= 160 mm, l= 206m) with a steel casing pipe (d=325mm / 6mm, l= 6m) to connect the “Anaklia” Hotel, crossing the ditch and road.
- The existing water supply – d=250mm rehabilitation and replacement was carried out using d= 200 mm, l= 940m of the new pipeline.

9. Construction of Sewerage System in Poti (POT-01). Pot-01 project includes the construction of 112.4 km of new sewerage pipes, and construction of 28 sewage pumping stations. United Water Supply Company of Georgia signed a contract with TAHAL Group BV on 20 December 2017. The final date of completion of the contract is July 31, 2020.

10. Construction of Wastewater Treatment Plant in Poti (POT-02). The project comprises of the construction of new Wastewater Treatment Plant with the capacity of 11,663 m³/day for Poti. The contract for construction of WWTP in Poti was signed on December 21, 2017 with JV “Pfeiffer - EMIT” comprised by “Ludwig Pfeifer Hoch – and Tiefbau GmbH Co. KG (Germany)” and “EMIT Group – Ercole Marelli Impianti Tecnologici S.r.l. (Italy). The final date of completion of the contract is July 31, 2020.

11. Construction of Water Supply System in Jvari (JVA-01). The major works to be implemented for rehabilitation and improvement of Jvari water supply system are following: construction of wells on the well field near the village Lia; installation of about 4 km long transmission pipeline; replacement of distribution pipes in the town; rehabilitation of existing reservoir or construction of new one depending on results of detailed investigation; construction of new pump station.

12. The contract for implementation of JVA-01 was signed on January 17, 2017 with AS Inshaat-N, LLC (Azerbaijan). The date of completion of the contract is April 2020 and further extended to September 2020.

13. Construction of Sewage Collection and Water Supply System in Gudauri (GUD-02). The major works to be implemented for rehabilitation and improvement of Gudauri sewage collection and water supply system, including construction of well field, Raw Water Reservoir of 500m³, water pipes and sewage collection system.

14. The contract for implementation of GUD-02 sub-project was signed on 4 January 2019 with “China Nuclear Industry 23 Construction Co.” LTD (CNI23). The date of completion of the contract is April 2021.
15. **Supervision Consultant for T4 of USIIP.** Supervision Consultant for Tranche 4 of USIIP is “SAFEGE France with Engineering Solution LLC Georgia”.

2.2. Project Contracts and Management

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. 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:
 - a. Issuing permits for project development (Environmental Decision)
 - b. Setting emission limits and issuing surface water intake and discharge consents
 - c. Responding to incidents and complaint
18. 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 Ms. Ana Onashvili. 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.
19. UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) – Safege under T4. 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.
20. All mitigation measures during construction are implemented respectively by the contractor companies: TAHAL, Pfeiffer, AsInshaan-N. Each contractor company have Environmental and safety officers responsible for HSE issues during construction process. Construction companies are monitored by the supervision consultant (Safege) environmental specialist – Mr. Shalva Bosikashvili 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 Safège prepares quarterly environmental reports and submits to UWSCG.

- 21.** 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.
- 22.** 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.
- 23.** 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.
- 24.** 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’s 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.
- 25.** 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.
- 26.** 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

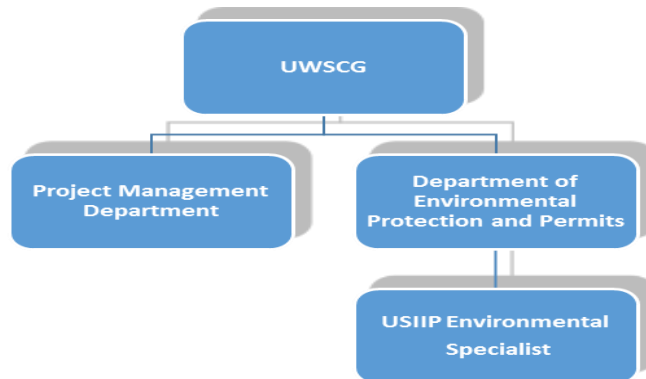
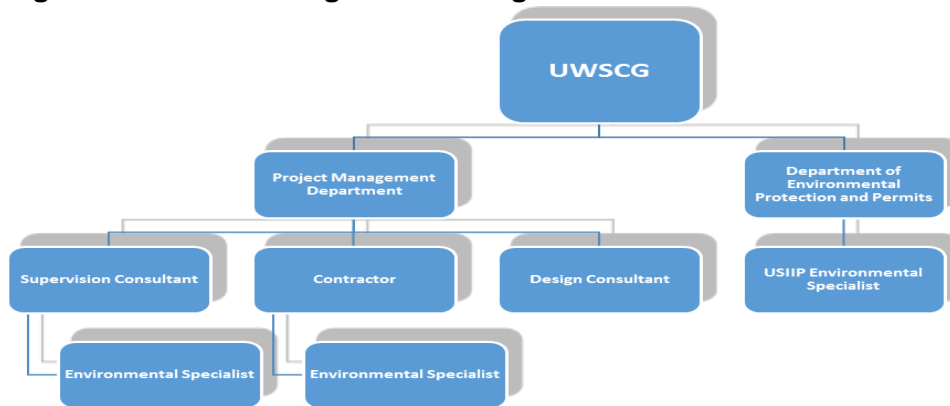


Figure 2: Structure Diagram of the Agencies Involved in Investment Program Implementation



27. A list of main organizations involved in the USIIP/T4 and relating to environmental safeguards is presented in Table 1 below.

Table 1: List of Main Organizations under USIIP/T4

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.	Nurlan Djenchuraev E-mail: ndjenchuraev@adb.org
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 595 070442 nnadashvili@adb.org
		ADB RETA International-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 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Projects Management, Head	Ms. Ana Onashvili Tel: +995 599 692090 E-mail: ana.onashvili@water.gov.ge
Borrower	UWSCG/USIIP/T4	Environmental Specialist	Ms. Ketevan Chomakhidze Tel:+995 577 380309 E-mail: Chomakhidzek@yahoo.com

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Supervision Consultant	SAFEGE (France) with Engineering Solution LLC (Georgia)	Environmental Specialist:	Mr. Shalva Bosikashvili Tel:+995 595116041 E-mail: sbosikashvili@yahoo.com
Contractor ZUG-01	AS Inshaat-N LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Nodar Usupishvili Tel:+995 577 68 16 71 E-mail: n.usupashvili@gmail.com
Contractor POT-01	TAHAL Group BV	Environmental H&S Specialist	Mr.Revaz Kalandadze Tel: +995 599 346 821 E-mail: r.kalandadze@yahoo.com

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Contractor POT-02	JV "Pfeiffer - EMIT" comprised by "Ludwig Pfeifer Hoch – and Tiefbau GmbH Co. KG (Germany)" and "EMIT Group – Ercole Marelli Impianti Tecnologici S.r.l. (Italy)	Environmental Specialist H&S Specialist	Mr. Nikoloz Neparishvili Tel: +995 599 346 821 E-mail: niko@telenet.ge nikoloz.nepharidze@ludwigpfeiffer.com
JVA-01	AS Inshaat-N LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Nodar Usupishvili Tel: +995 577 68 16 71 E-mail: n.usupashvili@gmail.com
GUD-02	"China Nuclear Industry 23 Construction Co." LTD (CNI23)	Environmental H&S Specialist	Mr. Aleksandre (Sasha) Mchedlishvili E-mail alexandermchedlishvili1@gmail.com Tel: +995 574 02 77 33

2.3. Project Activities during Current Reporting Period

28. During the reported period construction activities were implemented under POT-01, POT-02, JVA-01 and GUD-02 sub-Projects, therefore these sub-projects are reported in this Semi- annual EMR. Contractors have intensified all activities to improve the progress of the works on sites. The Engineers gave processed frequent instructions to the Contractor for the planning and outstanding documents preparation which shall ensure steady improvement of the works progress.

POT-02

29. The main activities under POT-02 during the reporting period of January-June 2020 is presented in the table 2 below:

Table 2: Project Progress during the January-June 2020 POT-02

POTI 02	POTI 02
Works undertaken during January 2020-June 2020	For POT-02 Project was executed Soil Improvement with stone Columns, from 1884 Columns was executed 100%.
Works undertaken during January 2020-June 2020	Civil works for structures are completed 90%

30. Pumping stations under POT-02 – no construction activities started. Complete detailed Design is still missing.

POT-01

31. The main activities under POT-01 project, carried out by contractor during the reporting period is provided in the table 3 below:

Table 3: POT-01, project progress during January-June 2020

HDPE PRESSURE PIPES PERFORMED ACTIVITIES	Completed Total (m)	Completed [%]
Ø 110 (mm) : 3603	3111.6	86.3
Ø 140 (mm) : 790,00	642,8	81.36%
@ 180 (mm): 480,00	382.2	79.6 %
Ø 315 (mm) : 935,00	736,7	78.8%
Ø 355 (mm) : 4 272,00	3242.42	75.9 %%
Ø 400 (mm) : 6,580,00	4514.03	68.6 %
Ø 630 (mm) : 820,00	814.3	99.3%
TOTAL = 17,480,00	13444.05	76.9%
HDPE GRAVITY CORRUGATED PIPE IN LINEAR METER		
Ø 150 (mm) : 37 500,00	5328.8	14.2%
Ø 200 (mm) : 57 000,00	7984.5	14 %
Ø 300 (mm) : 38 000,00	11138.1	29.3 %
Ø 400 (mm) : 1,643,00	111.7	6.7%

HDPE PRESSURE PIPES PERFORMED ACTIVITIES	Completed Total (m)	Completed [%]
Ø 500 (mm) : 1,739,6	456.8	26.26%
TOTAL = 135,882,06	25019.9	18.4 %

32. The overall progress of manholes: Concrete DN 1000 – 1440 pcs - 16.2%; HDPE DN 600 - 1300 pcs - 15.2%; HDPE DN 400 - 3030 pcs - 17.2%

JVA-01

33. The main activities under JVA-01 sub-project, carried out by contractor during the reporting period is provided in the table 4 below:

Table 4. Project Progress during the January-June 2020 for JVA-01

Jvari	Jvari Water Supply System Construction																																																				
Sites	Jvari Water Pipeline Network																																																				
Jvari	Jvari Transmission Pipelines																																																				
Works undertaken during January 2020-June 2020	<p>Executed January 2020 – December 2020. Total Completed %:</p> <table> <tbody> <tr><td>OD 63 PE SDR 11 - 1175m</td><td>100 %</td></tr> <tr><td>OD 90 PE SDR 11 – 2131m</td><td>100 %</td></tr> <tr><td>OD 110 PE SDR 11 – 8592m</td><td>100 %</td></tr> <tr><td>OD 140 PE SDR 11- 4808m</td><td>100%</td></tr> <tr><td>OD 160 PE SDR 11 - 186 m</td><td>100 %</td></tr> <tr><td>OD 200 PE SDR 11- 168m</td><td>100 %</td></tr> <tr><td colspan="2"> </td></tr> <tr><td>OD 40 PE SDR 17 - 34m</td><td>100%</td></tr> <tr><td>OD 50 PE SDR 17 - 9m</td><td>100%</td></tr> <tr><td>OD 63 PE SDR 17 - 2395m</td><td>100%</td></tr> <tr><td>OD 75 PE SDR 17 - 578m</td><td>100 %</td></tr> <tr><td>OD 90 PE SDR 17 - 2022m</td><td>100%</td></tr> <tr><td>OD 110 PE SDR 17 - 18514m</td><td>100%</td></tr> <tr><td>OD 140 PE SDR 17 - 211m</td><td>100%</td></tr> <tr><td>OD 160 PE SDR 17 - 5904m</td><td>100%</td></tr> <tr><td>OD 200 PE SDR 17 - 2194m</td><td>100%</td></tr> <tr><td colspan="2"> </td></tr> <tr><td colspan="2">Total Contract Quantity – 48 918m - 100 %</td></tr> <tr><td colspan="2"> </td></tr> <tr><td>OD DCI 300 SDR7.4 - 4200m</td><td>17%</td></tr> <tr><td colspan="2"> </td></tr> <tr><td colspan="2">House Connections:</td></tr> <tr><td>Private houses:</td><td>850 unit 98 %</td></tr> <tr><td>Apartment blocks:</td><td>1300 unit 98 %</td></tr> <tr><td colspan="2"> </td></tr> <tr><td colspan="2">Reservoir:</td></tr> </tbody> </table>	OD 63 PE SDR 11 - 1175m	100 %	OD 90 PE SDR 11 – 2131m	100 %	OD 110 PE SDR 11 – 8592m	100 %	OD 140 PE SDR 11- 4808m	100%	OD 160 PE SDR 11 - 186 m	100 %	OD 200 PE SDR 11- 168m	100 %			OD 40 PE SDR 17 - 34m	100%	OD 50 PE SDR 17 - 9m	100%	OD 63 PE SDR 17 - 2395m	100%	OD 75 PE SDR 17 - 578m	100 %	OD 90 PE SDR 17 - 2022m	100%	OD 110 PE SDR 17 - 18514m	100%	OD 140 PE SDR 17 - 211m	100%	OD 160 PE SDR 17 - 5904m	100%	OD 200 PE SDR 17 - 2194m	100%			Total Contract Quantity – 48 918m - 100 %				OD DCI 300 SDR7.4 - 4200m	17%			House Connections:		Private houses:	850 unit 98 %	Apartment blocks:	1300 unit 98 %			Reservoir:	
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Jvari	Jvari Water Supply System Construction
	Civil works completed 70% Lia Well Field: Mobilization – 100% All 9 wells 100% Finished Drilling (9 wells are equipped with Screens and Filters).

GUD-02

34. The main activities under GUD-02 sub-project, carried out by contractor during the reporting period is provided in the table 5 below:

Table 5: Project Progress during the January-June 2020 for GUD-02

GUD 02	GUD 02
Works undertaken during January 2020-June 2020	For GUD-02 Project was executed: <ol style="list-style-type: none"> 1. Installation of Corrugated Pipe D-200 – 250m; 2. Installation of Concrete Manhole – 25m;
Works undertaken during January 2020-June 2020	Producing Concrete Manholes – 1050m.

2.4. Description of Any Changes to Project Design

N/A

2.5. Description of Any Changes to Agreed Construction methods

N/A

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1. General Description of Environmental Safeguard Activities

35. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis, until early March 2020 before restrictions were imposed by the Government of Georgia on site visits in connection with the outbreak of the new Coronavirus - COVID-19 and then resumed in May 2020.
36. The Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) which applies to all sectors of economic activity.
37. The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector (Please see Annex G of this report).
38. Based on the above mentioned guidelines the construction staff must not appear in the workplace if they:
- Left the affected country over the past 14 days;
 - Were in close contact with infected person/persons for the past 14 days (they must be self- isolated/quarantined as per the rule);
 - Have symptoms of respiratory infection (coughing, temperature, sneezing, difficulty in breathing, general weakness etc.);
 - Are among the ones who have high risk of getting infected with COVID-19 or serious complications: over 70 years of age, people suffering from chronicle diseases (cardio-vascular diseases, diabetes, bronchial asthma and other respiratory diseases).
39. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under POT-01, POT-02, GUD-02 and JVA-01 sub-projects.
40. Environmental Monitoring Specialist hired under the JVA-01 sub-projects Mr. Nodar Usupishvili conducted the day-to-day monitoring of the construction sites, developed monthly monitoring reports and submitted to SC/Safege.
41. Environmental Monitoring Specialist hired under the POT-01 sub-project by contractor Mr. Rezo Kalandadze conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.
42. Environmental Monitoring Specialist hired under the POT-02 sub-project project by contractor Mr. Nikoloz meparidze conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.
43. Environmental Monitoring Specialist hired under the GUD-02 sub-project project by contractor Mr. Aleksandre Mchedlishvili conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.

44. Environmental Monitoring Specialist of Safege, Mr. Shalva Bosikashvili conducted monthly monitoring of project sites under T4 and developed Non-Conformance Notices where required. He also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.
45. 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. Prepare Non-conformance Notice were required developed Semi-Annual Environmental Monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
46. In accordance with the requirements of IEEs, Contractor is required to undertake parametric measurements and observations on air quality and noise and socio-cultural resources. The monitoring guidelines were set as shown in the table 6 below for JVA-01, POT-01 and POT-02 sub-projects.

Table 6: Parametric Measurement Guidelines

Parameters	Frequency & Location	Remarks
JVA-01		
Air Quality	Every 6 months Mukhnari Reservoir, Networks, Transmission Main	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	Every 6 months Lia Well Fields, Networks, Transmission Main	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Impact on Flora and Fauna	Monthly during the site Inspection and audit	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction

Parameters	Frequency & Location	Remarks
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	<p>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.</p> <p>Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.</p>
POT-01		
Air Quality	Every 6 months across the sewerage network	<p>Watering site during excavation works to avoid dust spreading</p> <p>Conduct measurements of Dusts Mg/m³; CO Mg/m³; NO₂ Mg/m³; SO₂ Mg/m³</p>
Noise	Every 6 months Reservoir #1, Sewerage Network	<p>Ensure that all equipment & vehicles used for construction activity are in good condition.</p> <p>Limiting working hours to 8 am – 6 pm.</p>
Cultural heritage Disturbance to cultural resources	Every time along the alignment Archaeological & Cultural Properties	<p>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.</p> <p>Calling in the state archaeological authority if a find is suspected, and taking any action they</p>

Parameters	Frequency & Location	Remarks
		require to ensure its removal or protection.
POT-02		
Air Quality	Every 6 months Waste Water Treatment Plant construction site	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	Every 6 months Waste Water Treatment Plant construction site	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm
Impact on Flora and Fauna	Monthly during the site monitoring.	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction
GUD-02		
Air Quality	Every 6 months Waste Water Treatment Plant construction site	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	Every 6 months Waste Water Treatment Plant construction site	Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm

Parameters	Frequency & Location	Remarks
Impact on Flora and Fauna	Monthly during the site monitoring.	Avoid tree cutting In unavoidable cases, plant four trees of same species for each tree that is cut for construction

47. Environmental and Social Compliance Audit Report¹ was prepared under Variation Order #4 and Variation Order #8: Construction of Water Supply System in Zugdidi sub-project (ZUG-01), and envisaged construction of additional Sewage Network Connections and Sewerage Pumping Stations of Anaklia. Main findings of the audit report are presented below:

- The main beneficiaries of the construction works under VO #8 were the citizens of Anaklia and Ganmukhuri who were provided with improved sanitation system, which serves the local population, including tourists as well. This improve the quality of life of people as well as raising standards of both individual and public health as the improvements in hygiene reduced the incidence of disease associated with poor sanitation. This lead to economic gains as people away from work less and will spend less on healthcare, so their incomes will increase;
- In terms of environment at the project implementation stage strong negative impact on environment was not expected. According to the ADB instructions the project fell under Category B. According to Georgia legislation Environmental Impact Assessment document preparation and obtaining relevant permit was not necessary for project implementation;
- All documents developed under the project (Loan Agreement, PAM, Contracts) included the obligation to implement the project according to the ADB SPS 2009 as well as pursuant to the environmental requirements stipulated in Georgian legislation;
- GRM system was established but no incidents have occurred during the construction stage and no complaints have been initiated by the residents;
- All project implementing units had hired environmental and social specialists with relevant qualifications;
- At the project implementation stage permanent trainings were held for contractor, as well as those specialists of all organizations involved in the project that dealt with social and environmental issues;
- SC environmental and social specialists performed permanent environmental monitoring under the project. Non-compliances identified by them adequately and corrective actions were planned. The effectiveness of corrective actions were also controlled by the above-mentioned specialists;
- Restoring works on the territory of sewerage pipes and pumping stations have been performed

¹ Social part of Environmental and Social Compliance Audit Report is under revision and in case of changes within the text updated version will be presented in the next Semi-annual EMR.

to the satisfactory level, except one section where the damaged asphalt cover has been restored at the unsatisfactory level;

- Contractor has disposed inert waste on the territory adjacent to the Anaklia city central street, in agreement with local self-government; the local authorities use the mentioned inert waste for restoring the boggy and uneven territories adjacent to the central road;
- Several public meetings have been carried out during the preparation of Audit report with the representatives of the local government and community members; During the site visits it was clarified that majority of the population is fully satisfied with the implemented activities under VO #8 of ZUG-01 Sub-Project, but in few cases some problems revealed with the house connections related to the difficult relief of the region. In particular, with the connection of pipes for individual houses to the main collector built in 2013-2014.
- **Recommendation:** In case the laying of new asphalt on the mentioned section is not planned under another project contractor has to restore the mentioned section (along with other non-compliances revealed during the audit) within one month from the receipt of audit report; the draft audit report will be shared with the Local Government and officials. Results of corrective actions will be reflected in the next Semi-annual EMR as of Jul-Dec 2020.

3.2. Site Audits

48. Regular inspection and monitoring of construction sites were conducted under POT-01, POT-02, GUD-02 and JVA-01 sub-projects by ESs of UWSCG/USIIP and Safege. The schedule of Joint inspection and summary of audits carried out under POT-01, POT-02, JVA-01 and GUD-02 sub-projects are provided in the Table 7 below.

Table 7. Summary of site audits

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
Continuously during reporting period (January-June 2020)	AS Inshaat-N LLC (Azerbaijan) JVA-01	Environmental, H&S Specialist of Contractor Mr. Nodar Usupishvili	Day to day monitoring of sites Compliance with Environmental and HES requirements	Poor housekeeping Safety issues on construction sites	Monthly Monitoring Reports

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
16.01.2020		Environmental Specialist of SC Mr. Shalva Bosikashvili	Monthly Monitoring of Sites	Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately.	Verbal Instruction was given to contractor to improve the situation
26.02.2020		Environmental Specialist of SC Mr. Shalva Bosikashvili, Environmental Specialist of CC Mr. Nodar Usupishvili	Compliance with EH&S requirements	Poor housekeeping Site internally should be arranged properly and cleaned regularly.	Verbal Instruction was given to contractor to improve the situation
Continuously during reporting period (January-June 2020)	JV "Pfeiffer – EMIT" POT-02	Environmental, H&S Specialist of Contractor Mr. Nikoloz Neparidze Environmental	Day to day monitoring of sites. Compliance with Environmental and HES requirements	Minimize tree cutting on construction site, due to construction purposes. Ensure proper protection of Red Book trees on site.	Continuously during reporting period (January-June 2020)
19.02.2020		Environmental specialists of USIIP Ms. Ketevan Chomakhidze Environmental monitoring specialists of SC/Safege Mr. Shalva Bosikashvili	Monthly monitoring of construction sites	Clean all kind of waste daily and store properly under shelters of in the buildings, don't mix waste and construction materials; Special training should be provided to the staff regarding;	Non- Compliance Notice Issued by Supervision Consultant (Please see Annex C)

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				<p>Housekeeping at the construction site and include this issue in daily Toolbox talks;</p> <p>Observe H&S relevant standards (Tripping & Slipping hazard prevention);</p> <p>Use relevant barriers and warning signs at the excavated pits and trenches</p>	
19.06.2020		Environmental specialists of USIIP Ms. Ketevan Chomakhidze Environmental monitoring specialists of SC/Safege Mr. Shalva Bosikashvili	Monthly monitoring of construction sites	Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground/water contamination.	Monthly Monitoring Reports Environmental Monitoring Checklist filled
Continuously during reporting period (January-June 2020)	TAHAL Group BV POT-01	Environmental H&S Specialist of Contractor Mr. Rezo Kalahdadze	Day to day monitoring of sites Compliance with Environmental and HES requirements	Improve hazardous waste management and place all waste containers on concrete base and provide roofing. Hazardous waste containers secondary drip trays have to be used.	Monthly Monitoring Reports Environmental Monitoring Checklist filled
31.01.2020		Environmental Specialist of SC Mr. Shalva Bosikashvili,	Regular Monitoring of sites	All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding,	Verbal instruction was given to contractor

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				<p>prohibit usage of the damaged Vehicles/Heavy equipment.</p> <p>Drip trays should be provided and used at the vehicle and heavy equipment maintenance area/ Re-fuelling points No Spill Response Equipment on site.</p>	
19.02.2020		Environmental Specialist of SC Mr. Shalva Bosikashvili	Regular monitoring of construction sites	<p>Site internally should be arranged properly and cleaned regularly.</p> <p>All construction materials and wastes should be properly segregated and stored adequately;</p> <p>Oil spill response kits should be placed at the appropriate locations;</p> <p>Refueling station should be equipped with the spill kit and fire relevant fighting equipment; drip tray should be used for fuel spillage</p>	<p>Non- Compliance Notice Issued by Supervision Consultant (Please see Annex C)</p> <p>Near Misses developed (Please see Annex E)</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				<p>prevention;</p> <p>Relevant traffic signs and flagmen should control traffic movement properly;</p> <p>Lack of warning signs and flagmen's negligence and associated traffic accident;</p> <p>Refueling safety violation. Special training should be provided to the relevant staff regarding refueling rules and the equipment used for vehicle/heavy equipment refueling to avoid spills and consequent ground contamination;</p> <p>Observe H&S relevant standards (Tripping & Slipping hazard prevention);</p> <p>Use relevant barriers and warning signs at the excavated pits and trenches Site staff without</p>	

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				relevant PPE.	
22 May, 2020		Environmental Specialist of SC Mr. Shalva Bosikashvili Environmental Specialist of UWSCG/USII P	Monthly monitoring of sites	Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately	Verbal instruction was given to contractor to improve the situation
Continuously during reporting period (January-June 2020)	China Nuclear Industry 23 Construction Co., Ltd	Environmental , H&S Specialist of Contractor Mr. Aleksandre Mchedlishvili	Day to day monitoring of sites Compliance with Environmental and H&S issues Monthly Monitoring of construction sites	Minimize tree cutting on construction site, due to construction purposes	Prepare monthly monitoring reports
24 June 2020		Head of Department of Environmental Protection and Permits/UWSCG Ms. Maka Goderdzishvili Head of Projects Management Department Ms. Ana Onashvili		The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, in accordance with Georgian Regulations and after the construction of the pipeline the same soil shall be replaced on the top, in unpaved areas; Safety/warning	Verbal instruction is given to contractor and SC, Non-compliance Notice issued and send to Contractor (Please see Annex C of this report)

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
		<p>Projects Management Department Ms. Nino Danibegashvili</p> <p>Projects Management Department Ms. Tamar Chelidze</p> <p>Environmental specialists of USIIP Ms. Ketevan Chomakhidze</p>		<p>signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident;</p> <p>Surplus waste soils should be removed and disposed in a proper place during the construction activities and not to make threat to workers ;</p> <p>All transmission line construction segments should be cleaned/well organized on regular bases ;</p> <p>Construction activities information signs should be installed at each construction segment</p> <p>Trench construction shall be taken up in small segments, so that work (excavation, pipe laying and refilling) in each segment is completed in a day;</p> <p>No trenches shall be kept open in the night/after work hours, in case construction works are not completed during the day time provide adequate lighting to avoid</p>	

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				<p>accidents</p> <p>Informing all residents and businesses about the nature and duration of any work well in advance so that they can make necessary preparations if needed</p> <p>Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required</p> <p>Increasing workforce to complete the work in minimum time</p> <p>Excavation works Flagman is required to control the movement of the Excavator on site</p> <p>Choose the right size equipment/excavator for a digging trenches</p> <p>Help driver during the excavation works move safely in their work areas, and help the drivers & operators avoid hazards and the potential of hitting people, other equipment and electrical cable Walls of the deep</p>	

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report
				<p>trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage) Safe distance from rotating equipment & excavation edges, giving Signals;</p> <p>Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to workers</p> <p>Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present.</p>	
25 June 2020		Environmental Specialist of SC Mr. Shalva Bosikashvili	Regular Monitoring of construction sites	<p>Topsoil should be stripped before construction activity and stored separately (not mixed with subsoil);</p> <p>Shoring in the trenches should be installed properly and inspected before usage, whether they are reliable.</p>	Non-compliance Notice issued and send to Contractor (Please see Annex C of this report)

3.3. Issues Tracking (Based on Non-Conformance Notices)

49. Non-Compliance Notices have been observed during the site visits under POT-02, JVA-01, POT-01 and GUD-02 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 SAFEGE 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.
50. A summary of the identified environmental issues under POT-02, POT-01, JVA-01 and GUD-02 sub-projects for January-June 2020 is presented in table 8, 9, 10 and 11 below.

Table 8: Summary of Issues Tracking Activity for Current Period – POT-02

Total Number of Issues for Project	11
Issues Opened This Reporting Period	4
Issues Closed This Reporting Period	7
Percentage Closed	63%

Table 9: Summary of Issues Tracking Activity for Current Period – JVA-01

Total Number of Issues for Project	3
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	2
Percentage Closed	67%

Table 10: Summary of Issues Tracking Activity for Current Period – POT-01

Total Number of Issues for Project	13
Issues Opened This Reporting Period	10
Issues Closed This Reporting Period	3
Percentage Closed	30%

Table 11: Summary of Issues Tracking Activity for Current Period – GUD-02

Total Number of Issues for Project	15
Issues Opened This Reporting Period	5
Issues Closed This Reporting Period	10
Percentage Closed	67%

3.4. Trends

51. To identify trends in environmental issues, information from previous Semi-Annual EMR (July-December 2019) is used. The summary of the issues is provided in the table 12 below.

Table 12: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
July-December 2019	47	74%	16%
January-June 2020	42	57%	43%

52. All major Non-Conformances under USIIP/T4 were reported verbally to the contractor during the reporting period and a written note of non-compliance was not prepared and submitted to the contractor.

3.5. Unanticipated Environmental Impacts or Risks

N/A

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1. Overview of Monitoring Conducted during Current Period

53. During the reporting period Environmental measurements of Noise level and Ambient air Quality were carried out by contractor only under Pot-02 sub-project.
54. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 13 and 14 below.

Table 13: Noise Level Guidelines

Noise	dBA		dBA	
	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

55. Air pollution standards by IFC/WHO 1999, are presented in the Table 14 below.

Table 14: 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

56. Environmental Quality Measurements of noise level and ambient air quality were conducted in 12 March 2020 by “Gergili”, LLC under POT-01 sub-project.
57. The air quality indicator parameters measured in the project area: CO, SO₂, NO₂, PM_{2.5} and PM₁₀. Measurements for air quality were taken as a background reading with equipment off. Second and third readings were taken in 10-meter and 20-meter radius from the working equipment, when the equipment was under heavy load.
58. The results of the air quality measurements are given in the table 15 below. The values were calculated as an average of 3 separate measurements done in one hour, every 20 minutes, during working equipment’s heavy load.

Table 15: Environmental Quality Measurements (Ambient Air Quality), POT-02

Locations	CO - mg/m ³ (Background)	SO ₂ - mg/m ³ (Background)	NO ₂ - mg/m ³ (Background)	PM 2.5, PM 10 - mg/m ³ (Background)
Akaki’s Street	0.8	0.00	0.198	0.035, 0.051
Black Sea Street	0.3	0.00	0.235	0.019, 0.096
(10 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Akaki’s Street	2.7	0.01	0.244	0.043, 0.057
Black Sea Street	3.1	0.02	0.287	0.034, 0.112
(20 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Akaki’s Street	0.7	0.00	0.162	0.023, 0.036
Black Sea Street	0.1	0.00	0.188	0.013, 0.078

59. The noise level in the immediate vicinity of the working machinery (e.g - 1 water pump, 1 excavator, 1 BobCat) varied between 73 – 81.1 dBA. However, the noise level sharply reduced after 10 – 20 meters (in the vicinity of the nearest fences of the residential housing) and was between 62 - 48 dBA respectively. The measurements were taken inside residents’ yards, where the noise levels decreased significantly and reached the maximum of 45 dBA on the balcony and between 32 - 42 dBA inside the residents’ houses, behind the closed entrance door.
60. According to data received in March 2020 noise level doesn’t exceeds the standards of the National Regulations and World Health Organization (IFC/WHO),1999 in POT-01 sub-projects and therefore no additional mitigation measures are required. IFC/WHO standards for Noise and Air pollution are presented in Tables 13 and 14 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 16:00 pm and no complaints were received from the local population about the noise during the reporting period.

Table 16: Environmental Quality Measurements (Noise level), POT-01 (Black Sea Street)

Time	Level dBA	Maximum Admissible Level max dBA
7am – 11 pm	55	70
11pm – 7am	45	60

61. Environmental quality measurements of noise level and ambient air quality under POT-02 sub-project was conducted by the National Environmental Agency of the Ministry of Environment Protection and Agriculture of Georgia in 29 June 2020 (See Table 17 below and Annex A). The next monitoring measurements will be conducted in September 2020 and results will be reflected in the next July-December 2020 EMR.
62. According to data received in June 2020 noise level doesn't exceeds the standards of the National Regulations and World Health Organization (IFC/WHO), 1999 in Zugdidi under ZUG-02 and REG-03a sub-projects and therefore no additional mitigation measures are required. IFC/WHO standards for Noise and Air pollution are presented in Tables 13 and 14 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 16:00 pm and no complaints were received from the local population about the noise during the reporting period.

Table 17: Environmental Quality Monitoring Measurement of Noise and Air Quality, POT-02

N	Place of measurement	Coordinates	Results				
			Dusts Mg/m3	CO Mg/m3	NO2 Mg/m3	SO2 Mg/m3	Noise dBA (MAX) (1-hour)
	National Environmental Standard (Maximum Permissible Level)		0,5	5,0	0,2	0,5	55 Residential; Institutional; Educational 70 Industrial; commercial
1	Poti WWTP	0719295 4675729	0.025	0.1	0.002	<0.1	49.1

63. Environmental quality measurements of noise level and ambient air quality under GUD-02 sub-project was conducted by the National Environmental Agency of the Ministry of Environment Protection and Agriculture of Georgia in 18 June 2020 (See Table 18 below and Annex A). The next monitoring measurements will be conducted in September 2020 and results will be reflected in the next July-December 2020 EMR.
64. According to data received in June 2020 noise level doesn't exceeds the standards of the National Regulations and World Health Organization (IFC/WHO),1999 under GUD-02 sub-projects and therefore no additional mitigation measures are required. IFC/WHO standards for Noise and Air pollution are presented in Tables 13 and 14 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 13:30 pm to 15:30 pm and no complaints were received from the local population about the noise during the reporting period.

Table 18: Environmental Quality Measurements, GUD-02

Measurement point		Measurement results							
Location	Coordinates	Noise Max. dBA (MAX) (1 hour)	Vibro Speed		Vibro Acceleration		Dust mg/m ³		
			m/s ²		db		PM _{2.5}	PM ₁₀	Total
Gudaury Pumping Station	38TO458883 4702404	46,7	<0,1	<66	<0,1	<100	0,026	0,031	0,051
Gudaury Reservoir	38TO457016 4703140	51,7	<0,1	<66	<0,1	<100	0,040	0,048	0,063
Gudaury Track	38TO457119 4702242	49,2	<0,1	<66	<0,1	<100	0,027	0,034	0,057

Table 19: Environmental Quality Measurements, GUD-02

Measurement Point		Measurement Results mg/m ³			
Location	Coordinates	Nitrogen dioxide	Sulfur dioxide	Carbon monoxide	Total Hydrocarbon
Gudaury Pumping Station	38TO458883 4702404	0,002	<0,01	0,13	<0,1
Gudaury Reservoir	38TO457016 4703140	0,021	<0,01	0,47	<0,1
Gudaury Track	38TO457119 4702242	0,008	<0,01	0,49	<0,1

4.2. Trends

65. All mitigation measures identified within the POT-01, POT-02 and JVA-01 projects are effective and no additional measures are required.

4.3. Summary of Monitoring Outcomes

66. Noise level during the construction period under POT-02 sub-project doesn't exceed the existing standards of IFC/WHO and therefore no additional mitigations are required by contractor. Contractors under JVA-01 and POT-01 sub-project as well as Supervision Company SAFEGE was strongly requested to provide environmental quality measurements under JVARI-01 and POT-01 sub-projects as well for the next Semi-annual EMR of January-June 2020.

4.4. Material Resources Utilization

4.4.1 Current Period

67. The material resources utilized by contractor - TAHAL Group BV, under POT-01 sub-project during the reporting period – January-June 2020 is provided in the table 20 below.

Table 20: Material Resources Utilization under POT-01 Sub-project, January-June-2020

Material Resources Utilization	
Water M ³ Indication	1650 M ³
Electricity KV Indication	67430.4 KW
Gas	1645 M ³

59. The following table provides information on the consumption of water and electricity in the framework of the POT-02 sub-project by the contractor - JV "Pfeiffer – EMIT".

Table 21: Material Resources Utilization under POT-02 Sub-project, January-June-2020

Material Resources Utilization	
Drinking Water	610 liter (daily)
Technical Water	690 liter (daily)
Electricity KV Indication	6200. KW

61. There is no information on material resources used during the reporting period under the JVARI-01 and GUG-02 sub-projects from the contractor - AS Inshaat-N LLC

(Azerbaijan) and SC / SAFEGE, despite numerous written and oral instructions and requests issued by Environmental Consultant of UWSCG / USIIP. SC is strongly requested to issue non-compliance notice to contractors under JVARI-01 and GUD-02 sub-projects on the above matter. The UWSCG will receive this information and present them in the SAEMR of the next reporting period, July-December 2020.

4.4.2. Cumulative Resource Utilization

N/A

4.5. Waste Management

4.5.1. Current Period

62. At the construction sites there are mainly produced household, construction (inert, surplus soil) and hazardous waste. 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. The amount of generated household under POT-01 sub-project is provided in the table 22 below:

Table 22: Generated Waste under POT-01 Sub-project, January-June 2020

Material Resources Utilization	
Household Waste	3610 kg (average 20kg daily)
Hazardous Waste	85 kg

67. 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.
68. The amount of generated household under POT-02 sub-project is provided in the table 23 below:

Table 23: Generated Waste under POT-02 Sub-project, January-June 2020

Material Resources Utilization	
Household Waste	3600 kg (average 20kg daily)
Hazardous Waste	210 kg (during the week)

69. The local municipality is responsible for the disposal of household waste under the POT-02 subproject, and the contractor has signed a contract with Medal Technologies Ltd. for the disposal of hazardous waste.

63. There is no information on construction waste used during the reporting period under the JVARI-01 and GUG-02 sub-projects from the contractor - AS Inshaat-N LLC (Azerbaijan) and SC / SAFEGE, despite numerous written and oral instructions and requests issued by Environmental Consultant of UWSCG / USIIP. SC is strongly requested to issue non-compliance notice to contractors under JVARI-01 and GUD-02 sub-projects on the above matter. The UWSCG will receive this information and present them in the SAEMR of the next reporting period, July-December 2020.

4.5.2. Cumulative Waste Generation

N/A

4.6. Health and Safety

4.6.1. Community Health and Safety

70. No community incidents have been reported to SC during reporting period under POT-01, POT-02 and JVA-01 sub-projects.

4.6.2. Worker Safety and Health JVA-01

71. Environmental H&S Manager of JVA-01 project Mr. Nodar Usupishvili was performing every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/SAFEGE and providing relevant reports on a regular basis taking into account any recommendations given by SC/UWSCG engineers.
72. Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Groundworks;
 - Manual works;
 - Upgrade Safety Hard and Warning Barricade
73. Contractor under JVA-01 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 JVA-01 project.
74. The following Near Misses were reported by SC under POT-01 and POT-02 sub-project, which may be resulted in Workers' Health and Safety problems (Please see Annex E):
- Some workers don't wear PPE, while PPE were in place.
 - No protection in open trenches. No shoring.
 - Transportation of construction materials with improper equipment no-covered with tarpaulins
75. During the reporting period, within the framework of the POT-01, ZUG-01, POT-02 and JVARI-01 sub-projects, no incidents with workers were registered.

76. No near-misses were reported under ZUG-01 and POT-02 as well, as there were no construction works carried out during the reporting period.

4.7. Training

77. Routine personnel trainings and toolbox talks happen by the construction companies almost on daily basis under JVA-01 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.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review

78. All SSEMPs under ZUG-01, POT-01, POT-02 and JVA-01 projects were prepared by Contractor, endorsed by SC and approved by UWSCG and reviewed/commented by the RETA Regional Environmental Consultant of ADB under RETA 8663 - Ms. Ketu Dgebuadze.
79. Location Specific Environmental Management Plan under JVA-01 project was prepared for Lia well fields within the reporting period (July 2018).
80. SSEMPs prepared by contractors, within the framework of ZUG-01, POT-01, POT-02 and JVA-01 sub-projects during the current and previous reporting periods are presented in table 19 below.
81. SEMP for construction of Water Reservoir and well fields under GUD-02 is prepared by contractor and submitted to SC for their endorsement.
82. Due to COVID-19 circumstances it is necessary to update SSEMPs for anti-COVID measures and reflect it within the next Semi-annual EMR (due in Jan 2021).

Table 24: SSEMPs Prepared under ZUG-01, POT-01, POT-02 and JVA-01 Sub-projects are given in the table below:

No	Project/Site	Date of Approval
1	ZUG-01 – Ingiri Well fields and Pumping Station	March 2016
2	ZUG-01 – Bashi Reservoir	January 2016
3	Pot-02/Poti WWTP	31 May 2018
4	Jvari-01/Lia Well Fields	July 2018

83. All of the SSEMPs listed above are effective, mitigation measures are still relevant, no changes are required.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

84. N/A

6.2 Opportunities for Improvement

85. N/A

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

- 68.** Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis, until early March 2020 before restrictions were imposed by the Government of Georgia on site visits in connection with the outbreak of the new Coronavirus - COVID-19 and then resumed in May 2020.
- 69.** The Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) which applies to all sectors of economic activity.
- 70.** The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector.
- 71.** Based on the above mentioned guidelines the construction staff must not appear in the workplace if they:
- Left the affected country over the past 14 days;
 - Were in close contact with infected person/persons for the past 14 days (they must be self- isolated/quarantined as per the rule);
 - Have symptoms of respiratory infection (coughing, temperature, sneezing, difficulty in breathing, general weakness etc.);
 - Are among the ones who have high risk of getting infected with COVID-19 or serious complications: over 70 years of age, people suffering from chronicle diseases (cardio-vascular diseases, diabetes, bronchial asthma and other respiratory diseases).
- 86.** Environmental Monitoring Specialist of Safege, Mr. Shalva Bosikashvili conducted monitoring of project sites under T4 and developed Non-Conformance Notice were required. He also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.
- 87.** The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under POT-01, POT-02, JVA-01 and GUD-02 sub-projects.
- 88.** Environmental Specialist of USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMPs, and other environmental commitments of the contractor. USIIP/ES developed Semi-annual monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.
- 89.** 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.
- 90.** 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.

91. Necessary instructions have been given to the Contractor by UWSCG and SC to follow the EMP's and SSEMP's requirements for GUD-02, POT-01, POT-02 and JVA-01 sub-projects.

7.2 Recommendations

92. During the reporting period, January-June 2020, the T4 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.
93. Contractors to update SEMP's for anti-COVID measures – Q3 2020.
94. More detailed recommendations for the implementation of T4 during the next reporting period July-December 2020 are provided in the table 25 below:

Table 25: Recommendations to Address Environmental Issues under POT-01, POT-02, JVA-01 and GUD-02 sub-projects.

Recommendations POT-01, JVA-01, POT-02 and GUD-02sub-projects	
Recommendations POT-01	Implementation status and date
Poti Network	
<p>Lack of warning signs and flagmen’s negligence and associated traffic accident; Site internally should be arranged properly and cleaned regularly; Drip tray should be used for fuel spillage prevention; Special training should be provided to the relevant staff regarding refueling rules and the equipment used for vehicle/heavy equipment refueling to avoid spills and consequent ground contamination; Use relevant barriers and warning signs at the excavated pits and trenches</p>	<p>Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the July 2020</p>
JVA-01	
<p>Site internally should be arranged properly and cleaned regularly; Drip tray should be used for fuel spillage prevention; Relevant traffic signs and flagmen should control traffic movement properly; All construction materials and wastes should be properly segregated and stored adequately; Oil spill response kits should be placed at the appropriate locations</p>	<p>Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG by the 10 July 2020.</p>

Recommendations POT-01, JVA-01, POT-02 and GUD-02sub-projects

POT-02

Clean all kind of waste daily and store properly under shelters of in the buildings, don't mix waste and construction materials;
 Use relevant barriers and warning signs at the excavated pits and trenches
 Clean all kind of waste daily and store properly under shelters of in the buildings, don't mix waste and construction materials

Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG by the 15 of July 2020.

GUD-02

The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, in accordance with Georgian Regulations and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas;
 Surplus waste soils should be removed and disposed in a proper place during the construction activities and not to make threat to workers;
 Safety/warning signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident;
 All transmission line construction segments should be cleaned/well organized on regular bases;
 Construction activities information signs should be installed at each construction segment;
 Informing all residents and businesses about the nature and duration of any work well in advance so that they can make necessary preparations if needed;
 Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required

Contractor is given strong instruction to improve the situation, develop CAP (if requested) and send improved photos of Site to SC and UWSCG, start immediately, within five days.

- 95. Conduct Post-Construction Environmental Audit by the September 2020 for ZUG-01 project and reflect findings of the audit in the next Semi-Annual EMR of July-December 2020.
- 96. Conduct monitoring of Ambient Noise and Air quality under POT-01 project at the nearest sensitive receptors in September 2020.

Table 26: The Specific Plan for Environmental Measurement under POT-01 Project

Parameters	Quarterly measurement
Dust	September 2020
Vibration	September 2020
Carbon monoxide	September 2020
Nitrogen dioxide	September 2020
Sulfur dioxide	September 2020
Noise	September 2020

97. Conduct monitoring of Noise and Ambient Air quality under POT-02 project near the sensitive receptors of Construction sites in September 2020.

Table 27: The Specific Plan for Environmental Measurement under POT-01 Project

Parameters	Quarterly measurement
Dust	September 2020
Vibration	September 2020
Carbon monoxide	September 2020
Nitrogen dioxide	September 2020
Sulfur dioxide	September 2020
Noise	September 2020

98. Conduct monitoring of Noise and Ambient Air quality under JVA-01 project at the nearest sensitive receptors of Construction sites in September 2020.

Table 28: The Specific Plan for Environmental Measurement under JVA-01 Project

Parameters	Quarterly measurement
Dust	September 2020
Vibration	September 2020
Carbon monoxide	September 2020
Nitrogen dioxide	September 2020

Parameters	Quarterly measurement
Sulfur dioxide	September 2020
Noise	September 2020

ANNEX A: Environmental Monitoring Data of Noise and Ambient Air Quality Pot-01



VOL/P43405-ICB-POT-01/THL/PM/RE/2020/717
Date: 6 April 2020

TO: ASSISTANT RESIDENT ENGINEER
SAFEGE ENGINEERING SOLUTIONS
ATTN: Mr. MAMUKA BOKHUA

Dear Sir,

CONTRACT: P43405-ICB-POT-01
POTI SEWERAGE SYSTEM CONSTRUCTION
SUBJECT: QUARTERLY PARAMETRIC MEASUREMENT

Dear Sir

With the reference of the subject above the Contractor submit the Air, Noise & Vibration monitoring report. The control was performed by Gergili LLC company. In their document is mentioned the places evaluated in Poti, equipment and the environmental references.

The attachment is for your consideration and approval.

Yours faithfully,
For and on behalf of TAHAL GROUP B.V.

Maurice Turiski

Contractor's Representative

TAHAL Group B.V. Kokoa Alley #10, Poti, Georgia, Tel.: +995 599 354246 • e-mail: Info@tahal.com
Member of the Kardan Group



TRANSMITTAL SHEET

Date : 06.04.2020
Doc. No : **MATERIALS_P43405-ICB-POT-01 - 001**
Project : Poti sewerage system construction
Contract No : P43405-ICB-POT-01
Ref : VOLI_P43405-ICB-POT-01_THL_PM_RE_2020_717
To : ARE MAMUKA BOKHUA – SAFEGE
From : Contractor's Representative

Delivered with this transmittal sheet :

No	Copies	Document No	Description	Rev	Remark
1	1	VOLI/P43405-ICB-POT-01/THL/PM/RE/2020/717	QUARTERLY PARAMETRIC MEASUREMENT		

					
<p>Project:</p> <p>Improvement of Poti Wastewater System Sub-project Air, Noise &Vibration monitoring under project March, 2020</p> <p>Prepared for: Tahal Group</p> <p>Prepared by: Gergili LLC (202200787)</p> <p>Vajha-Pshavela Ave., III Block, Building 7, Apt.13, Tbilisi Georgia Mobile: +995 599 164469 E-mail: info@gergili.ge Website: www.gergili.ge</p>					
A01	18-03-2020	Client Review & Approval	Gergili	Tahal	Tahal
Rev	Date	Reason for Issue	Prepared by	Checked by	Approved by
	Project Area	Poti, Georgia	Document Description		
	Transfer Date	12 th and 13 th of March, 2020	Improvement of Poti Wastewater System Sub-project (Air, Noise & Vibration monitoring)		
Project Code			Revision		
GERG001			A01		

4. Measurement results

This report describes air, noise and vibration measurements performed in March (12th and 13th), by Gergili LLC subcontractor, Ltd. BBE in Poti, under the contract with TAHAL GROUP B.V.

Test were performed on 12th and 13th of March, 2020 in Poti:

The Construction Contractor carried out the construction works at the following streets:

Akaki's Street, Poti 4400: [42 136108](tel:42136108), [41 683368](tel:41683368)

Black Sea Street, Poti: [42 186502](tel:42186502), [41 682989](tel:41682989)

4.1 Noise Monitoring

The noise level in the immediate vicinity of the working machinery (e.g. - 1 water pump, 1 excavator, 1 BobCat) varied between 73 – 81.1 dBA. However, the noise level sharply reduced after 10 – 20 meters (in the vicinity of the nearest fences of the residential housing) and was between 62 – 48 dBA respectively. The measurements were taken inside residents' yards, where the noise levels decreased significantly and reached the maximum of 45 dBA on the balcony and between 32 - 42 dBA inside the residents' houses, behind the closed entrance door.

As a rule, noise caused by moving equipment is reduced at some distance. Such reduction has logarithmic properties. In case of noise caused by construction activities, noise spread pattern from the noise point is used, that can be determined as: $\text{Noise level}1 - \text{Noise level}2 = 20 \log r2/r1$.

The Georgian standards for noise control were defined and approved by the Decree of the Minister for Health, Labour and Social Affairs (297n of August 16, 2001) on the „Approval of Environmental Quality Standards“, which specify the tolerable and maximum admissible levels of noise for different zones.

Time	Indicative Level dBA	Maximum Admissible Level max dBA
7am – 11 pm	55	70
11pm – 7am	45	60

Table 4.2 Georgian Noise Quality Standards in Residential Areas

With reference to the distance from noise source please see the noise level table given below.

Distance from noise source, m	Calculation level of the noise Average value - dBA	Calculation level of the noise Maximum value - dBA
10	80	90
20	74	84
40	68	78
80	62	72
160	56	66
320	50	60

Table 4.2.1 Noise Level

4.3 Vibration Monitoring

Vibration of the equipment was measured at different points. The vibration acceleration and velocity of the water pump on its own, vibration acceleration and velocity of the ground in 10 and 20-meter radius from the working equipment (e.g. - 1 water pump, 1 excavator, 1 BobCat) was measured. All pump motors showed the vibration acceleration and velocity in the similar range: 15.2 – 20.1 m/s² and 7.4 – 9.8 mm/s respectively. The vibration from the pumps was directly taken from its' motors. The vibration acceleration and velocity were measured in 10 and 20-meter radius from the pump and other equipment working simultaneously. Vibration of the pump and equipment was not transferred to the ground and the distance of vibration transfer was lost in less than 10-meter radius from working equipment and machinery. Detailed measurements can be found in annex 2 – Measurement Results.

4.4 Air Quality Monitoring Results

The air quality indicator parameters measured in the project area: CO, SO₂, NO₂, PM2.5 and PM10. Measurements for air quality were taken as a background reading with equipment off. Second and third readings were taken in 10-meter and 20-meter radius from the working equipment, when the equipment was under heavy load.

The results of the air quality measurements are given in the table below. The values were calculated as an average of 3 separate measurements done in one hour, every 20 minutes, during working equipment's heavy load.

Locations	CO - mg/m ³ (Background)	SO ₂ - mg/m ³ (Background)	NO ₂ - mg/m ³ (Background)	PM 2.5, PM 10 - mg/m ³ (Background)
Akaki's Street	0.8	0.00	0.198	0.035, 0.051
Black Sea Street	0.3	0.00	0.235	0.019, 0.096
(10 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Akaki's Street	2.7	0.01	0.244	0.043, 0.057
Black Sea Street	3.1	0.02	0.287	0.034, 0.112
(20 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Akaki's Street	0.7	0.00	0.162	0.023, 0.036
Black Sea Street	0.1	0.00	0.188	0.013, 0.078

Table 4.4 Air Quality Measurement Results

If we compare previous report's and this report's air quality measurement results, we would be able to see a significant difference in the values of the air quality parameters. One of the reasons can be the fact that previous measurements were carried out at three different locations and the geographical location of Akaki Street and Black Sea Street, as well as, the number and intensity of the vehicles moving on these streets are much greater than at previous three locations. Another, and probably the main, reason which might be a main contributor to difference in measurement results, is weather conditions. During the previous measurements on 21st of January, there was a heavy rain seen throughout the whole day and the night before the measurements took place. The relative humidity of the air was in the range of 90 – 92% in January, when on 12th and 13th of March it ranged between 30.9 – 35 %. The air temperature was ranging between 5 - 7°C on 21st of January and 17 - 18°C on 12th and 13th of March. The wind speed was an average of 2.5 m/s on January date and 2.1 m/s on March dates. Heavy rain, in general, cleans the air, sets and washes on the

ground all the air contaminants. This could be clearly seen in the results of the previous monitoring report as the values of air contaminants were much lower on 21st of January. The ongoing wastewater project work's contribution to the already existing air contamination level is insignificant as it can be clearly observed in the table above. The equipment and machinery only work simultaneously during a maximum of 1 – 1.5 hours per working day and when the values are calculated as an average during an 8-hour work shift, the contamination values caused by construction work decrease even more.

5. Equipment

Devices used for various measurements on the site:

Noise level measurements - Reed Instruments SD-9300, SL-417 Noise Level Microphone Adapter

Vibration level measurements – Reed Instruments SD-8205, Vibration Meter

Air quality measurements – AeroQual Series 500 Handheld Air Quality Monitor with detachable CO, SO₂, NO₂, and PM sensors

All the declared thresholds regarding environmental quality can be seen in the following document:

August 16, 2001, Ministry of Labor, Health and Social Affairs of Georgia N°297 / N, Approved Environmental Quality of the Norms



Ltd. BBE – Science, Research Laboratory
 Address: Tbilisi, Vazha-Pshavela ave., III Block, 0186
 E-mail: bbelab2019@gmail.com
 I/C: 405 347 469

Certificate of Analysis № TAHALQ1(2)-2020.03.12

Date of issue - 2020.03.23

Sample type and quantity: Real time monitoring of air quality, noise and vibration

Client's information: Genjili LLC, I/C: 202 200 787

Place and time of sampling: City of Poti, Georgia, Akaki's Street (42.136108, 41.683368), Black Sea Street (42.166502, 41.662989), 12:30 – 15:30 (12th of March), 11:30-14:30 (13th of March)

Start and finish date and time of analysis: 2020.03.12 – 2020.03.13

Sampler: Ltd. BBE

Sample I/C: TAHALMAR-1-2020.03.12, TAHALMAR-2-2020.03.13

Location #1 – Akaki's Street, 42.136108, 41.683368

Location	Parameter	Unit	Result
Akaki's Street	Background		
	CO	mg/m ³	0.8
	NO ₂	mg/m ³	0.198



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	SO ₂	mg/m ³	0.00
	PM 2.5	mg/m ³	0.035
	PM 10	mg/m ³	0.051
	Noise	dBA	44
	Ground Vibration Acceleration	m/s ²	0.00
	Ground Vibration Velocity	mm/s	0.00
Pump Motor	Vibration Acceleration	m/s ²	20.1
Pump Motor	Vibration Velocity	mm/s	7.4
10 meter radius, Equipment ON*	CO	mg/m ³	2.7
	NO ₂	mg/m ³	0.244
	SO ₂	mg/m ³	0.01
	PM 2.5	mg/m ³	0.043
	PM 10	mg/m ³	0.057
	Noise	dBA	62
10 m radius from pump and equipment	Vibration Speed	m/s ²	0.00
10 m radius from pump and equipment	Vibration Acceleration	mm/s	0.2
20 meter radius, Equipment ON*	CO	mg/m ³	0.7
	NO ₂	mg/m ³	0.162
	SO ₂	mg/m ³	0.00
	PM 2.5	mg/m ³	0.023
	PM 10	mg/m ³	0.036
	Noise	dB	48
20 m radius from pump and equipment	Vibration Speed	m/s ²	0.00
20 m radius from pump and equipment	Vibration Acceleration	mm/s	0.00



Ltd. BBE – Science, Research Laboratory
 Address: Tbilisi, Vazha-Pshavela ave., III Block, 0186
 E-mail: bbelab2019@gmail.com
 I/C: 405 347 469

Location #2 – Black Sea Street, 42.166502, 41.662989

Location	Parameter	Unit	Result		
Black Sea Street	Background	CO	mg/m ³	0.3	
		NO ₂	mg/m ³	0.235	
		SO ₂	mg/m ³	0.00	
		PM 2.5	mg/m ³	0.019	
		PM 10	mg/m ³	0.096	
		Noise	dB	51.2	
		Ground Vibration Acceleration	m/s ²	0.00	
		Ground Vibration Velocity	mm/s	0.00	
		Pump Motor	Vibration Acceleration	m/s ²	15.2
		Pump Motor	Vibration Velocity	mm/s	9.8
		10 meter radius, Equipment ON*	CO	mg/m ³	3.1
			NO ₂	mg/m ³	0.287
			SO ₂	mg/m ³	0.02
			PM 2.5	mg/m ³	0.034
PM 10	mg/m ³		0.112		
Noise	dB		60		
10 m radius from pump and equipment	Vibration Speed	m/s ²	0.00		
10 m radius from pump and equipment	Vibration Acceleration	mm/s	0.00		
20 meter radius, Equipment ON*	CO	mg/m ³	0.1		
	NO ₂	mg/m ³	0.188		
	SO ₂	mg/m ³	0.00		



Ltd. BBE – Science, Research Laboratory
 Address: Tbilisi, Vazha-Pshavela ave., III Block, 0186
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	PM 2.5	mg/m ³	0.013
	PM 10	mg/m ³	0.078
	Noise	dB	50
20 m radius from pump and equipment	Vibration Speed	m/s ²	0.00
20 m radius from pump and equipment	Vibration Acceleration	mm/s	0.00

Environmental Quality Measurement Data DUG-02

18th June 2020

To: UWSCG
Mr. Grigol Mandria

Our Ref: UWSC – 765/OUT-VH
Contract: P43405-ICB-GUD-02
Subject: Supervision of Gudaori 02 – QUARTERLY PARAMETRIC MEASUREMENT REPORT

Dear Sir,

Please find attached Contractor's letter GUD02-CN123-ENG-20075 dated 18/06/2020- QUARTERLY PARAMETRIC MEASUREMENT REPORT for your information.

For the Engineer



Victor Hruska
Team Leader

Urban Services Improvement Investment Program (Project 4)



SAFEGE-with Engineering Solutions LLC as sub-consultant - ADD ADDRESS
SAFEGE Europe & Africa - Guillelme 92, 1200 Brussels, BELGIUM - Tel: +32 2 739 46 90 - Fax: +32 2 742 38 91
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China Nuclear Industry 23 Construction Co., Ltd
Construction of Sewage and Water Supply Systems in Gudauri
(UWSCG-ICB-GUD-02-2018)

The Contractor

Address: #5 Java street, 0180 Tbilisi, Georgia
Telephone: +995 571246556

Safege Ingenieurs Conseils/Engineering Solution LLC as sub-consultant
Mr. Victor Hruska, Team Leader
Medea Chakhava #9
0177 Tbilisi, Georgia

[your reference/date]	[our reference/date]	[your contact]	[e-mail]
	GUD02-CNI23-ENG-20075 2020-06-18	Luo Ke	gudauri@cni23.com

Construction of Sewage and Water Supply Systems in Gudauri
(UWSCG-ICB-GUD-02-2018)

Subject: Quarterly Environmental Parametric Measurement Report

Dear Mr. Victor,

We are sending Quarterly Environmental Parametric Measurement Report, please kindly find the attachment.

Yours sincerely

Contractor of Construction of Sewage Collection and Water Supply Systems in Gudauri

Mr. Luo Ke
Project Manager

Appendix : 8 pages

Copy to: Contractor internal

**Construction of Sewage Collection and Water Supply Systems in
Gudauri (UWSCG-ICB-GUD-02-2018).**

**Date of Commencement March 1 2019 Term of Work
Completion December 2021**

1. Introduction

The Government of Georgia wishes to improve and expand Water Supply and Sanitation (WSS) Services across urban centers by leveraging donor and private sector funds and has requested ADB to develop an investment program to be financed through a multi-tranche financing facility (MFF). The proposed Investment Program will specifically address basic urban infrastructure and services management in the provincial capitals and secondary towns. The Investment Program will be implemented in various tranches; each tranche containing technically feasible and economically viable subprojects developed by UWSCG and agreed with ADB.

The present tender considers the "Construction of Sewage Collection and Water Supply Systems in Gudauri".

2. Location of the project areas

Gudauri is a ski resort located on the south-facing plateau of The Greater Caucasus Mountain Range in Georgia, in the Stepantsminda District, along the Georgian Military Highway near the Cross Pass, 120 km to the north of the capital Tbilisi on the way to Kazbegi and two hours drive from the Tbilisi International Airport..

3. Regulatory Requirements

The environmental quality standards on the territory of Georgia are regulated by Decree No 297N of August 16, 2001 of the Minister of Labor, Health and Social Affairs of Georgia "On the approval of the environmental quality standards" (State Registration Code 470.230.000.11.119.004.920).

The following amendments were made to the above-mentioned decree:

1. Decree No 38/N of February 24, 2003 of the Minister of Labor, Health and Social Affairs of Georgia, SSM III, №16, 06.03.2002, Article 150
2. Decree No.251/N of the Minister of Labor, Health and Social Affairs of Georgia of September 15, 2006– SSMIII, №129, 20.09.2006, Article 1716
3. Decree No.351/N of the Minister of Labor, Health and Social Affairs of Georgia of December 17, 2007– SSMIII, №179, 18.12.2007, Article 1974
4. Decree No.304/N of the Minister of Labor, Health and Social Affairs of Georgia of September 18, 2009– SSMIII, №115, 22.09.2009, Article 1312

5. Decree No.98/N of the Minister of Labor, Health and Social Affairs of Georgia of April 14, 2010– SSMIII, №39, 14.04.2010, Article 622

6. Decree No.350/N of the Minister of Labor, Health and Social Affairs of Georgia of October 25, 2010 - SSMIII, №138, 26.10.2010, Article 2000

7. Decree No.01-24/N of the Minister of Labor, Health and Social Affairs of Georgia of May 17, 2012 – web-site, 17.05.2012.

3. Description of the work to be performed.

In accordance with the agreement concluded between the Construction Contractor and Naseto Group LLC, environmental quality analysis was carried out at various points in Gudauri.

Construction work has not yet been carried out, so all the measurement results are background. Background measurements were carried out at the sites of the future construction of the reservoir, pumping station and pipeline route.

4. Performed measurements and results

Gudauri is not a settlement where stationary observations of the quality of atmospheric air are carried out, therefore pollution data are not available.

4.1 Noise and vibration.

The measured noise and vibration are also background.

As a rule, the noise caused by the movement of equipment is reduced at some distance. Such a reduction has logarithmic properties. In the case of noise caused by construction work, the noise propagation scheme from the noise point is used, which can be determined as follows: Noise level 1 - Noise level 2 = $20 \log r_2 / r_1$, which means that when doubling the distance, the noise decreases by 6 dBA.

Table 2: Noise levels

Distance from noise source, m	Calculation level of the noise Average value - dBa	Calculation level of the noise Maximum value - dBa
10	80	90
20	74	84
40	68	78
80	62	72
160	56	66
320	50	60

4.4 Air quality values

The quality indicators of the following components measured in the project area: air quality with total hydrocarbons, sulfur and nitrogen dioxide, carbon monoxide ,dust,noise and vibration by the executor The results of the accomplished quality measurements given in Annex1.

Կոմիտասի օդափակիչի ՀՀ ցմրեղևակալի և քարաքար կայանաբազան
 "Komita Branch of China Nuclear & Environment Company Co., Ltd"
 Արևիկի մթնոլորտ օդափակիչների, նիտրոնի և ծծմբի քիմիական կազմակերպության կազմակերպություն
 18.06.2020, 13⁰⁰ - 15⁰⁰

Dust air pollution, noise and vibration measurements on 18.06.2020, 13⁰⁰ - 15⁰⁰

№	Վերնային կետեր/Measurement point		Վարկերի կազմակերպություն/Measurement results								
	Հասցե/Տեղանկյուն/Location	Գործարար/Քանոն/Contractor	Նկարագրիչ/Նշանակում/Note	Վերնային կաշիկ/Վերնային արագություն/Vibration speed		Վերնային արագություն/Վերնային արագություն/Vibration acceleration		Սխալ/Սխալ/Total			
				mm/s	cm/s	m/s ²	m/s ²	Pmax	Pmin	Total	
											dB
1	Ճարտարան/Կայան/Կայան/Կայան/Construction site	387048883 470404	45.7	<0.1	<0.6	<0.1	<0.00	2.226	0.001	0.051	
2	Ճարտարան/Կայան/Կայան/Կայան/Construction site	387045016 470414	51.7	<0.1	<0.6	<0.1	<0.00	0.340	0.048	0.063	
3	Ճարտարան/Կայան/Կայան/Կայան/Construction site	3870497119 470242	40.1	<0.1	<0.6	<0.1	<0.00	0.327	0.055	0.057	

Արևիկի մթնոլորտ օդափակիչի օդափակիչի, նիտրոնի և ծծմբի քիմիական կազմակերպության կազմակերպություն
 Նիտրոնի և ծծմբի քիմիական կազմակերպության կազմակերպություն
 18.06.2020, 13⁰⁰ - 15⁰⁰

Nitrogen and sulfur dioxide, carbon monoxide and total hydrocarbon air pollution measurement results on 18.06.2020, 13⁰⁰ - 15⁰⁰

№	Վերնային կետեր/Measurement point		Վարկերի կազմակերպություն/Measurement results mg/m ³			
	Հասցե/Տեղանկյուն/Location	Գործարար/Քանոն/Contractor	Նիտրոնի օդափակիչ/nitrogen dioxide	Ծծմբի քիմիական կազմակերպություն/sulfur dioxide	Նիտրոնի և ծծմբի քիմիական կազմակերպություն/carbon monoxide	Չրմբի քիմիական կազմակերպություն/total hydrocarbon
			mg/m ³	mg/m ³	mg/m ³	mg/m ³
1	Ճարտարան/Կայան/Կայան/Կայան/Construction site	387048883 470404	0.02	<0.01	0.13	<0.1
2	Ճարտարան/Կայան/Կայան/Կայան/Construction site	387045016 470414	0.02	<0.01	0.07	<0.1
3	Ճարտարան/Կայան/Կայան/Կայան/Construction site	3870497119 470242	0.028	<0.01	0.09	<0.1

კონსტრუქციის დროს გამოყენებული ხელსაწყოები/ During measurement tools used:

ხმაური/Noise - Mini Sound Level Meter N1902;

ვიბრაცია/Vibration- Smart Sensor 0 AHSB Vibration Meter;

დაბერეწიანობა/ Dust- Portable Dust Detector model LD-1E308

და Gaeila Mikro Dust Pro (ოქსიდობრივი ხელუფალი და ოპტიკური ფილტრით, Self calibration zero and optical filter.) აზოტის დიოქსიდის და ნახშირობადის მონიტორინგის - nitrogen dioxide and carbon monoxide - 2span CO/NOx

ჯამური ნახშირწყალბადების - total hydrocarbon MiniRae 7500;

ფოტორღის დიოქსიდის - sulfur dioxide - WASH-XM-E-SO2.

2001 წლის 16 აგვისტოს, საქართველოს შრომის, ჯანმრთელობის და სოციალური დაცვის მინისტრის ბრძანება №297/მ, გარემოს ხარისხობრივი მდგომარეობის ნორმების დამტკიცების შესახებ. / August 16, 2001, the Ministry of Labor, Health and Social Affairs of Georgia №297 / M.

აპარათული გარემოს ხარისხობრივი მდგომარეობის ნორმების დამტკიცების შესახებ:

დაბერეწიანობის ნორმა შეადგენს 0.5 მგ/მ³; / Dust norm is 0.5 mg / m³;

აზოტის დიოქსიდის ნორმა შეადგენს 0.2 მგ/მ³; / nitrogen dioxide norm is 0.2 mg / m³;

ფოტორღის დიოქსიდის ნორმა შეადგენს 0.5 მგ/მ³; / sulfur dioxide norm is 0.5 mg / m³;

ნახშირობადის მონიტორინგის ნორმა შეადგენს 5 მგ/მ³; / carbon monoxide norm is 5 mg / m³;

ჯამური ნახშირწყალბადების ნორმა შეადგენს 1 მგ/მ³; / total hydrocarbon norm is 1 mg / m³;

ვიბრაციის ნორმა შეადგენს 112 მგ; / Vibs-speed norm is 112 მგ;

ვიბრაციის ნორმა სპეციალური დამცავი საშუალებების გამოყენების გარეშე - 126 მგ; /Vibs acceleration norm special protective outlets without using - 126 მგ;

დირექტორი
Director

ტექნიკური შემსრულებელი
Technical Contractor



Environmental Quality Measurement, POT-02

საგარეო საფრთხის მართვისა და სოფლის მეურნეობის სამინისტრო
MINISTRY OF ENVIRONMENT PROTECTION AND AGRICULTURE OF GEORGIA

საქართველოს ეროვნული სააგენტო
LEPL NATIONAL ENVIRONMENTAL AGENCY

N 12/1-476

29.06.2020

შპს "ლუდეოგ აგროფერ ჰილ ჟინდ ტრეილ და კო. კვ"-ის წარმომადგენლობა საქართველოში-ს დირექტორს ქ-ს ჰელენ სპიციგერს

ქალბატონო ჰელენ,

საქართველოს გარემოს დაცვისა და სოფლის მეურნეობის სამინისტროს საკანცელარიო-გარეო ურთიერთსააგენტო-სა და შპს "ლუდეოგ აგროფერ ჰილ ჟინდ ტრეილ და კო. კვ"-ის წარმომადგენლობა საქართველოში-ს შორის 2020 წლის 08 ივნისს გაფორმებული ფაქტობრივი მომსახურების შესახებ ფაქტ-3/390 ხელშეკრულების თანახმად, გაწეული ქ. ზედიდისა და ქ. ფოთში, თქვენს მიერ მოითხოვულ ატმოსფერული ჰაერის 2 (ორ) წერტილში - მხარის, ნახშირბადის, მტკვრის, აზოტის დიოქსიდის და გოგირდის დიოქსიდის შემცველობის გაზომვის შედეგებს ქართულ და ინგლისურ ენაზე.

დანართი 2 კვ.

შპს „ლუდვიგ პვაიფერ ჰიბ უნდ ტიფბაუ და კოკის წარმომადგენლობა საქართველოში“.
 ატმოსფერული ჰაერის დაბინძურების და ხმაურის დონის გაზომვის შედეგები.

ხელშეკრულება ფმ-3/390 პასუხის დანართი

N	გაზომვის ადგილი	კოორდინატები	დამაბინძურებელი ინგრედიენტების კონცენტრაცია მგ/მ ³				ხმაურის ბგერის დონე დბ
			მტვერი	ნახშირბადის მონოქსიდი	აზოტის დიოქსიდი	გოგირდის დიოქსიდი	
1	ქ.ფოთი	0719284 4675743	0.025	0.1	0.002	<0.1	49.1
2	ქ. ზუგდიდი	0734030 4708169	0.051	0.37	0.005	<0.1	51.4
მაქსიმალური ერთეგრადი კონცენტრაცია			0.5	5.0	0.2	0.5	
საქართველოს მთავრობის დადგენილება №398 2017 წლის 15 აგვისტო ქ. თბილისი							55

მი. სპეციალისტი:

ს.კოძე

ო.ყენია

წამყვანი სპეციალისტი

გ. მარგოშია

გ. მარგოშია

შეთანხმებულია:

დეპარტამენტის უფროსი



მ. არაბიძე

Ltd „Ludwig Pfeiffer Hoch and Tifbauand Co. Representative in Georgia“.

Results of atmospheric air pollution and noise level measurments

attachment

N	location	Measurement coordinates	Concentration of pollutant ingredients mg / m3				Noise sound level db
			Dust	Carbon monoxide	Nitrogen dioxide	Sulfur dioxide	
1	City Poti	0719284 4675743	0.025	0.1	0.002	<0.1	49.1
2	City Zugdidi	0734030 4708169	0.051	0.37	0.005	<0.1	51.4
Maximum allowable concentration			0.5	5.0	0.2	0.5	
Georgian government decree №398 2017 year 15 August Tbilisi							55

Main Specialist: O. Kenia

Kenia

Lead Specialist: G. Morgoshia

Agreed:

Head of the Department

M. Arabidze



ANNEX B: PHOTOS

JVA-01, Network



JVA-01 Reservoir



Photos POT-02, Construction of WWTP



ANNEX C: NON-COMPLIANCE NOTICE (POT-01), 19 February 2020

Project: Construction Supervision (under USIIP, Tranche 4 Projects), UWSCG/USIIP/QCBS/02-2014	Non-compliance Notice Poti 01
Contract No: P43405-ICB-POT-01	
Contractor: TAHAL GROUP	
Reference:	

This notice is to advise 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 arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spill response kits should be placed at the appropriate locations. Refuelling station should be equipped with the spill kit and fire relevant fighting equipment; drip tray should be used for fuel spillage prevention. Relevant traffic signs and flagmen should control traffic movement properly.

NON-COMPLIANCE IN POTI 02

WWTP Poti 01

- Lack of warning signs and flagmen's negligence and associated traffic accident.
- Refueling safety violation. Special training should be provided to the relevant staff regarding refueling rules and the equipment used for vehicle/heavy equipment refueling to avoid spills and consequent ground contamination.
- Observe H&S relevant standards (Tripping & Slipping hazard prevention) ; Use relevant barriers and warning signs at the excavated pits and trenches
- Site staff without relevant PPE



All these conditions have to be remedied within 10 days by the prime Contractor **TAHAL GROUP**

Date of site visit: 19.02.2020

Shalva Bosikashvili - Environmental specialist -
"SAFEGE"

Ketevan Chomakhidze - Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE (POT-02)

Project: Construction Supervision (under USIIP, Tranche 4 Projects), UWSCG/USIIP/QCBS/02-2014	Non-compliance Notice Poti 02
Contract No: P43405-IC-POTI-02	
Contractor: Ludwig Pfeiffer	
Reference:	

This notice is to advise 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 arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spill response kits should be placed at the appropriate locations.

NON-COMPLIANCE IN POTI 02

WWTP Poti 02

- Clean all kind of waste daily and store properly under shelters of in the buildings, don't mix waste and construction materials
- Special training should be provided to the staff regarding Housekeeping at the construction site and include this issue in daily Toolbox talks.
- Observe H&S relevant standards (Tripping & Slipping hazard prevention) ; Use relevant barriers and warning signs at the excavated pits and trenches



All these conditions have to be remedied within 10 days by the prime Contractor **Ludwig Pfeiffer**

Date of site visit: 19.02.2020	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	



25th June 2020

**TO: China Nuclear Industry
23 Construction CO., LTD**

Our Ref.: GUD 02 –135/OUT -VH

Contract: UWSCG-ICB-GUD-02-2018

**Subject: Supervision of Construction of Sewage Collection and Water Supply
Systems in Gudauri – Non-Compliance Notice**

Dear Sir,

Please find attached our Environmental Specialist's Non-Compliance Notice.


For the Engineer

A handwritten signature in black ink, appearing to read "Hruska".

Victor Hruska

Team Leader

Non-Compliance Notice

Project: Construction Supervision (under USIIP, Tranche 4 Projects), UWSCG/USIIP/QCBS/02-2014	Non-compliance Notice Gudauri
Contract No: UWSCG-ICB-GUD-02-2018	
Contractor: China Nuclear Industry 23 Construction Co., Ltd	
Reference:	
<p>This notice is to advise the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented urgently.</p> <p>GENERAL COMMENT FOR ALL SITES: Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spill response kits should be placed at the appropriate locations. Refuelling station should be equipped with the spill kit and fire relevant fighting equipment; drip tray should be used for fuel spillage prevention. Relevant traffic signs and flagmen should control traffic movement properly. H&S standards and rules should be addressed and implemented.</p> <p>NON-COMPLIANCE IN Gudauri</p> <p>Construction of Sewage Collection and Water Supply Systems in Gudauri</p> <ul style="list-style-type: none"> - Topsoil should be stripped before construction activity and stored separately (not mixed with subsoil). - Shoring in the trenches should be installed properly and inspected before usage, whether they are reliable. 	
	
<p>All these conditions have to be remedied within 10 days by the Contractor China Nuclear Industry 23 Construction Co., Ltd</p>	
Date of site visit: 25.06.2020	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, GUD-02, 24 JUNE 2020

Non-Compliance Notice

Project: USIIP	Non-Compliance Notice Gudauri
Contract No: GUD-02	
Contractor: China Nuclear Industry 23 Construction Co. Supervisor Consultant: SAFEGE	
Reference: GUDAURI – Construction of Water Supply and Sewerage Network	
<p>This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently. Reference IEE/EMP for Gudauri WS sub-project</p>	
<p><u>NON-COMPLIANCE IN</u></p>	
<p>NETWORK GUDAURI</p> <ul style="list-style-type: none"> - The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, in accordance with Georgian Regulations and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas; - Safety/warning signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident - Surplus waste soils should be removed and disposed in a proper place during the construction activities and not to make threat to workers - All transmission line construction segments should be cleaned/well organized on regular bases - Construction activities information signs should be installed at each construction segment - Trench construction shall be taken up in small segments, so that work (excavation, pipe laying and refilling) in each segment is completed in a day. No trenches shall be kept open in the night/after work hours, in case construction works are not completed during the day time provide adequate lighting to avoid accidents - Informing all residents and businesses about the nature and duration of any work well in advance so that they can make necessary preparations if needed - Providing wooden walkways/planks across trenches for pedestrians and metal sheets where vehicle access is required - Increasing workforce to complete the work in minimum time 	
<p>Excavation works</p> <p>Flagman is also required to control the movement of the Excavator on site</p> <ul style="list-style-type: none"> - Choose the right size equipment/excavator for a digging trenches - Help driver during the excavation works move safely in their work areas, and help the drivers & operators avoid hazards and the potential of hitting people, other equipment and electrical cable - Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents (workers damage) - Safe distance from rotating equipment & excavation edges, giving Signals. - Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to 	

workers;

- Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present.

Photos of CoGudauri WWS Network



All these conditions have to be remedied immediately by contractor and Supervisor	
Date of site visits: 24.06.2020	
Maka Goderdzishvili, Head, Department of Environmental Protection and Permits, UWSCG Ana Onashvili, Head, Projects Management Department, UWSCG Kate Chomakhidze, Environmental Consultant UWSCG/USIIP	

NON-COMPLIANCE NOTICE POT-02, 19 February 2020

Non-Compliance Notice

Project: Construction Supervision (under USIIP, Tranche 4 Projects), UWSCG/USIIP/QCBS/02-2014	Non-compliance Notice Poti 02
Contract No:P43405-IC-POTI-02	
Contractor: Ludwig Pfeiffer	
Reference:	

This notice is to advise 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 arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spill response kits should be placed at the appropriate locations.

NON-COMPLIANCE IN POTI 02

WWTP Poti 02

- Clean all kind of waste daily and store properly under shelters of in the buildings, don't mix waste and construction materials
- Special training should be provided to the staff regarding Housekeeping at the construction site and include this issue in daily Toolbox talks.
- Observe H&S relevant standards (Tripping & Slipping hazard prevention) ; Use relevant barriers and warning signs at the excavated pits and trenches



All these conditions have to be remedied within 10 days by the prime Contractor **Ludwig Pfeiffer**

Date of site visit: 19.02.2020

Shalva Bosikashvili - Environmental specialist - "SAFEGE"

Ketevan Chomakhidze - Environmental specialist "UWSCG"

ANNEX D: HSE INSPECTION REPORT, POT0-1

SAFEGE/ESL HSE INSPECTION REPORT

Date & Time: 19.02.2020 Location: Poti 01

Subject of Inspection: HSE practice/Performance and culture on site

Supervisor: Stephen Bayley Contact Details: _____

People Interviewed:

No	Name	Position	Comment
1	Moshe Turiski	Project Manager	
2	Alexander Chanturia	Field HSE Manager	



Refueling safety violation. Special training should be provided to the relevant staff regarding refueling rules and the equipment used for vehicle/heavy equipment refueling to avoid spills and consequent ground contamination.



Lack of warning signs and flagmen's negligence and associated traffic accident.



Worker without PPE at the construction site

General Housekeeping

- Housekeeping and waste management acceptable

H&S

- Information board and restriction signs are placed at the entrance.
- Entrance is controlled by security police; entry for visitors is allowed after registration..
- Stray animals at the site should be forbidden.

Sanitation

- Toilet is clean.

Personal Protective Equipment (PPE)

- PPE in place. Some workers don't wear PPE.
- Refreshment training should be provided about specific PPE and PPE requirements in general

Vehicles & Equipment Safety

- Some leakages were detected

Accident Reporting

- Minor traffic accident (Zone 14. Chavchavadze str)

Medical Cover

- No medical cover on site.

Fire Safety

- Fire action board is placed on site.
- Fire extinguishers are placed on the action board
- No fire board and extinguishers at the refueling station

Emergency Response

- Emergency Response plan is not elaborated and Master Point is not defined and announced

Training (including HIV/AIDS Awareness Program)

- All site personnel are trained; training record and hard copies are kept at the office;
- Spill/Contamination prevention and Vehicle/Heavy equipment inspection trainings should be carried out for the relevant contractor's staff.
- Training should be provided to the staff regarding Housekeeping at the construction site and include this issue in daily Toolbox talks.
- Special training should be provided to the refueling staff (use drip trays absorbent pads) for fuel spill prevention

Environment

- Only non hazardous waste wheelie bins are provided and placed where necessary.
- Drip trays should be provided and used at the vehicle and heavy equipment maintenance area/ Re-fuelling points
- No Spill Response Equipment on site; Spill kits should be placed at the vehicle and heavy equipment maintenance area, fuel and lubricant storage and refueling points.

- Waste storage and disposal should be improved.
- All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding, prohibit usage of the damaged Vehicles/Heavy equipment.
- General housekeeping is acceptable
- Power generator should be placed in the sufficient drip tray or concrete fuel/oil containment band should be arranged around.

Social:

- No social issues were raised; all the activities are being preliminary agreed with local government representatives. Hard copies kept in office.

Cultural heritage:

- N/A

Other (specify):

Inspector (s):

Shalva Bosikashvili Environmental Specialist
Name Position

Rezo Kalandadze HSE Manager
Name Position

SAFEGE/ESL HSE INSPECTION REPORT POT-02

Date & Time: 19.02.2020 Location: Poti 02

Subject of Inspection: HSE practice/Performance and culture on site

Supervisor: Mahmut Fatih Onde Contact Details: _____

People Interviewed:

No	Name	Position	Comment
1	Christian Zschorn	Project Manager	
2	Eni Mokia	Field HSE Manager	



Unacceptable housekeeping. Special training should be provided to the staff regarding Housekeeping at the construction site and include this issue in daily Toolbox talks.
Also tripping/Slipping hazard.



Observe H&S relevant standards (Tripping & Slipping hazard prevention) ; Use relevant barriers and warning signs at the excavated pits and trenches

--

General Housekeeping

- | |
|---|
| <ul style="list-style-type: none">• Housekeeping is not satisfactory. |
|---|

H&S

- | |
|---|
| <ul style="list-style-type: none">• Information board and restriction signs placed at the entrance.• Entrance is controlled by security police; enter for visitors are allowed after registration..• Stray animals at the site should be forbidden. |
|---|

Sanitation

- | |
|--|
| <ul style="list-style-type: none">• Toilets and washing facilities are clean. Bio-toilet installed for workers |
|--|

Personal Protective Equipment (PPE)
--

- | |
|--|
| <ul style="list-style-type: none">• PPE in place. Some workers don't wear PPE. |
|--|

Vehicles & Equipment Safety
--

- | |
|--|
| <ul style="list-style-type: none">• Relevant parking zone arranged |
|--|

Accident Reporting

- | |
|---|
| <ul style="list-style-type: none">• No accident was reported. |
|---|

Medical Cover

- | |
|---|
| <ul style="list-style-type: none">• No medical cover on site. |
|---|

Fire Safety

- | |
|--|
| <ul style="list-style-type: none">• Fire action boards are not placed on site. |
|--|

- No fire extinguishers

Emergency Response

- Emergency Response plan is not elaborated and Master Point is not defined and announced

Training

- All site personnel are trained; training record and hard copies are kept at the office;
- Spill/Contamination prevention and Vehicle/Heavy equipment inspection trainings should be carried out for the relevant contractor's staff ASAP.
- Training should be provided to the staff regarding Housekeeping at the construction site and include this issue in daily Toolbox talks.

Environment

- Vehicles and heavy equipment parking outside the defined parking should be prohibited. Hazardous and non hazardous waste wheelie bins are provided and placed where necessary.
- All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding, prohibit usage of the damaged Vehicles/Heavy equipment.
- General housekeeping is acceptable
- **Fuel, lubricants and chemicals should be stored in the building with proper ventilation or under temporary shelters.**
- **During refueling drip trays and absorbent pads should be used to prevent environment contamination by hydrocarbons.**

Social:

- No social issues were raised; all the activities are being preliminary agreed with local government representatives. Hard copies kept in office.

Cultural heritage:

- N/A

Other (specify):

Inspector (s):

Shalva Bosikashvili
Name

Environmental Specialist
Position

Eni Mokia

Name

HSE Manager

Position

General Housekeeping
<ul style="list-style-type: none"> Housekeeping is not satisfactory.

Environment
<ul style="list-style-type: none"> Vehicles and heavy equipment parking outside the defined parking should be prohibited. Hazardous and non hazardous waste wheelie bins are provided and placed where necessary. All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding, prohibit usage of the damaged Vehicles/Heavy equipment. General housekeeping is acceptable Fuel, lubricants and chemicals should be stored in the building with proper ventilation or under temporary shelters. During refueling drip trays and absorbent pads should be used to prevent environment contamination by hydrocarbons.

Social:
<ul style="list-style-type: none"> No social issues were raised; all the activities are being preliminary agreed with local government representatives. Hard copies kept in office.

Cultural heritage:
<ul style="list-style-type: none"> N/A

Other (specify):

Inspector (s):

<u>Shalva Bosikashvili</u>	<u>Environmental Specialist</u>
Name	Position

<u>Eni Mokia</u>	<u>HSE Manager</u>
Name	Position

ANNEX D: ENVIRONMENTAL MONITORING CHECKLIST

Monitoring has been conducted by Rezo Kalandadze, the Tahal Group Environmental Manager, for the project of construction of the Poti city sewage system. The monitoring results and comments are presented below.

Environmental weekly Monitoring Report #28	
Name of the Contractor and project number/lot	TAHAL GROUP B. V. Poti sewage system construction Contract No: P43406-ICB-POT-01
Name of the Consultant company	SAFEGE Engineering Solution
Description and Location of the Site	<p>Poti-01 Site</p> <p>This project is located in City of Poti. The City of Poti is the most developed part of the Samegrelo - Zemo Svaneti region of Georgia. It is located on the Black Sea and lies some 350 km to the west from the capital City of Tbilisi. To the west it borders the Black Sea; to the north the right tributary of the rivers Rioni and Khobi and to the southeast the river Kapatchina and Palastomi Lake. Regional location of Poti is shown in below:</p> <p>The project measures for the sewer network comprise the laying of 150 km new gravity pipes (DN 100 to DN 1200) and 25 km new pressure pipes (OD 110 to OD 630). The sewer network is divided into two zones, Poti South and Poti North. The southern part will serve an existing wastewater treatment plant in the South of Poti, the northern part - about 85% of the total network - will serve the new wastewater treatment plant to be constructed under the present project. As the terrain is flat a number of pumping stations of different size will be constructed. All existing pumping stations will be replaced.</p>
Employer	"United Water Supply Company of Georgia", LLC

Monitoring date (Year/Month/Day)	2019/06/10 – 2019/06/14				
Environmental specialist's Identity (name, last name, contact information)	Contractor: TAHAL GROUP B. V. Moshe Turiski 595 750227				
Rezo Kalandadze Phone Number: 599 386026					
Current Stage of Civil Works	On-going				
Weather Conditions	Sunny				
Topics	Status				Comments
	Yes	Partially	No	N/A	
Contractor company have approved EMP and H&S plans	Yes				EMP and H&S plans prepared and approved by the Engineer.

The construction contractor has the national HSE Specialist in the staff.	Yes			
The Construction subcontractors have the national HSE officers in the staff.			NO	The contractor's EHS specialist have selected the persons from each site staff who has been providing the workers with daily safety tool box talks. Each subcontractor must have full time, skilled safety officer on the working site. The issue is under discussion.
HSE rules and regulations are observed on the working sites and at the camp according to the Georgian and International regulations.	Yes			The observance of the HSE rules and regulations has been monitored on the daily bases. If violation takes place it is responded and corrected immediately.
Lifting operations are conducted with observing of the lifting safety rules.		Partially		Lifting operations are under the control by the contractors HSE staff. In case of non-compliance of the HSE rules corrective actions are taken immediately Improper lifting ropes (Photo below) and lack of operators certifications are the issue currently.

The Construction Contractor engages 1 archeologist for daily supervision (during soil excavation activities).			NO	The site engineers have been instructed that, in case of archeological findings, immediately stop working activities and contact the contractor's environmental manager.
Monthly EHS monitoring reports are prepared by the subcontractor and submitted to the contractor.			NO	The subcontractor's site safety officer is responsible to be on site all the time of working activities, provide the working team with daily tool box talk and inform the contractor's safety specialist by phone if there is any safety problem that he could not handle to mitigate/eliminate. Weekly report has been prepared by the contractor EHS manager.
Monitoring reports disclosed to local communities and relevant government agencies.			N/A	
Complaints log exists on construction site.	Yes			
Site inspection non-compliance notices issued and corrective action requests implemented.	Yes			
The Contractor has an environmental permit for production of construction materials (cement, asphalt, brick, etc.)			No	The contractor doesn't produce construction material.

	The Contractor has a permit or relevant contract from the Municipality for final disposal of construction waste.	Yes			The construction wastes have been disposed at the territories which are approved by the local municipality to be used for the relevant purpose.
	The Contractor has a permit for final disposal of municipal waste.			NO	As construction has been conducted in the urban areas, the municipal waste is being disposed by the municipal cleaning service.
	The Contractor has executed the contract with the licensed organization on the hand-over and disposal of hazardous waste.			NO	The Contractor will contact to the hazardous waste disposal company when the waste is in a considerable quantity.
	The Contractor has a license for tree felling			NO	The CONTRACTOR will contact with the local municipality and ask for wood specialist/botanist to attend the group for identification of a tree species which are enlisted in the red list of Georgia or under special code of tree cutting (Forest code of Georgia). After the mentioned above procedure the permit will be issued by the local municipality.
	The site is fenced and warning signs are arranged.		Partially		Working activities are conducted in the urban area streets and there is no possibility to fence the site. The safety portable fences and warning signs have been used at the working areas.

	During excavation works, in case of any archeological chance finds, the works are suspended and the employer is notified in written form.	Yes				A similar case has not yet been occurred.
	Measurement of the noise, dust and vibration is applied as per project SMP.	Yes				
Top soil protection	Topsoil is stripped and stored according to standard procedures and used further for landscaping and reinstatement.	Yes				The Contractor have not stripped topsoil at any working site (there was no topsoil on contractor's working sites so far)
Pollution Prevention	Pollution prevention and response measures are implemented.	Yes				
Prevention of trees	Trees are protected from cutting or unintentional damage. Cutting is performed only in cases of proved necessity and in agreement with municipality.	Yes				

Safety Measures	The workers use all personal protective equipment required for individual technological processes (hard hats, gloves, respirators, glasses, etc.).	Yes				At this time the issue is solved. Monitoring of the issue is conducted on the daily basis.
	The sites are provided with the firefighting and emergency medical aid kits, site is fenced, provided with lighting, signs etc. installed, etc.	Yes				Firefighting and emergency medical aid kit are at office. The site engineer instructed to have the first aid kit on the sites. The issue is solved.
	Deep excavations have been inspected on the presence of H2S gas at the bottom of the pits.			NO		Gas detector should be obtained by the contractor for measuring of H2S (hydrogen sulfide) gas in the excavations.
	Daily toolbox talks and safety instructions have been conducted for the workers on the sites as required by Georgian and international safety regulations.	Yes				
	The contractor/subcontractor heavy equipment (excavators, crane, etc.) operators are certified properly. All mobile heavy equipment have been provided with the reverse beepers and top flashers.		partially			Issue about certificates for the operators and the flashers for all mobile equipment on sites still are open.
	The project working sites are under the supervision of at least one full time and experienced/trained safety representative (can be selected from the site staff.)	Yes				

	Shoring are used when workers entering the excavated trenches/pits deeper than 1.5m.	Yes				Shoring have been used at particular sites where the excavated trenches levels are >1.5 and walls are extremely unstable. The trench walls must to be braced or shored up where shoring could not be installed otherwise the works will be stopped until issue is fixed. At present the issue is solved.
	The project sites have been cleaned up and solved on daily bases.	Yes				
	The contractor and consulting company camp have been provided with the emergency exits, fire extinguishers and assembly point in case of fire or other emergencies.		partially			Offices and nearby buildings are equipped with the fire extinguishers. There is no emergency exit at TANAL's office on the second floor. The issue is still under discussion.
Work Completion	After completion of main works, the site undergoes final clean up, harmonization with outward landscape and landscaping.			No		Zone 25 (subcontractor MZ) group) the site works are completed but final cleanup is not done. The Photos below.
	After completion of the operations in the quarry or its certain section, the site material is backfilled, compacted, surfaced and harmonized with the landscape.				N/A	
	Final Post Construction Environmental Audit/Monitoring is conducted and Final Environmental Audit Report is prepared.			No		Will be commenced after completion of works.

ANNEX E: NEAR MISSES (POT-01)

Near Misses (POT-01)

Date & Time: 23.10.2019 Location: POT-01

Subject of Inspection: HSE practice/Performance and culture on site

Supervisor: Stephen Bayley, Shalva Bosikashvili Contact Details: _____

People Interviewed:

No	Name	Position	Comment
1	Moshe Turiski	Project Manager	
2	Alexander Chanturia	Field HSE Manager	



1. No shoring. Worker without PPE in the trench
2. Transportation with improper equipment.

H&S

- Information board and restriction signs are placed at the entrance.
- Stray animals at the site should be forbidden.

Personal Protective Equipment (PPE)

- PPE in place. Some workers don't wear PPE.
- Refreshment training should be provided about specific PPE and PPE requirements in general

Accident Reporting

- No accident was reported.

Medical Cover

- No medical cover on site.

Fire Safety

- Fire action board is placed on site.
- Fire extinguishers are placed on the action board

Emergency Response

- Emergency Response plan is not elaborated and Master Point is not defined and announced

Social:

Other (specify):

Inspector (s):

<u>ShalvaBosikashvili</u>	<u>Environmental Specialist</u>
Name	Position

<u>Rezo Kalandadze</u>	<u>HSE Manager</u>
Name	Position

ANNEX F: GENERAL GUIDELINES RELATED TO INFECTION (COVID-19) CAUSED BY NOVEL CORONAVIRUS (SARS-CoV-2) FOR CONSTRUCTION SECTOR



MINISTRY OF INTERNALLY DISPLACED
PERSONS FROM THE OCCUPIED
TERRITORIES, LABOUR, HEALTH AND
SOCIAL AFFAIRS OF GEORGIA

Labour Conditions Inspection Department
Create Together Safe Working Environment

Annex №2

General Guidance Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) for Construction Sector

Note: In accordance with Order N281/N of the Minister of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia on "the rule for Examination for Short-term Employment Disability and Issuance of Doctors Note", the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia will issue an equivalent document to the doctors excuse note (Medical Certificate) to persons quarantined in order to prevent the spread of coronavirus. The document will serve as the basis to receive monthly payment and therefore, the working days spend in quarantine or in self-isolation will be legitimate and fully paid to the employees. In order to get the certificate, an interested person has to apply to the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia at - info@mdsh.gov.ge.

For further information, please contact:

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☎ 116 001

StopCoV.ge

The job of builders involves constantly changing work places and work activity existing in open-air conditions. For this reason, in terms of virus spread, construction falls within the medium risk sector because its specificity covers natural ventilation. Nevertheless, it is important to consider the following preventive measures at construction work.



The staff must not appear in the workplace if they :

- Left the affected country over the past 14 days;
- Were in close contact with infected person/persons for the past 14 days (they must be self-isolated/quarantined as per the rule);
- Have symptoms of respiratory infection (coughing, temperature, sneezing, difficulty in breathing, general weakness etc.);
- Are among the ones who have high risk of getting infected with COVID-19 or serious complications: over 70 years of age, people suffering from chronic diseases (cardio-vascular diseases, diabetes, bronchial asthma and other respiratory diseases).

Employer's responsibilities

- Whether or not the incidence of infection is detected, employer should develop an emergency action plan to support reduction of working days missed due to illness, and in case of detection – prevention of spread;
- Provide employees with information about safe working procedures and about prevention of virus spread (guide with the recommendations defined by LEPL L. Sakvarelidze National Center for Disease Control and Public Health of the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia);
- Inside the working space post announcements about COVID-19 and about the preventive measures that have been identified by LEPL L. Sakvarelidze National Center for Disease Control and Public Health;
- In relation to the employees who can perform job remotely (administrative personnel) ensure as much as possible use of such working mode;
- At the entrances of break room/dining room, place disinfecting rugs with relevant mandatory sign marking;
- Provide hand-washing facility with soap and other disinfectants. If hand-washing facility is not feasible, at least 70% alcohol-based hand cleansing liquid should be used;
- Visibly place the hand sanitizers and post the rules of their proper use;
- Make sure that employees have access to hand sanitizers and are aware of their use with proper rules;
- Provide all employees and contractors, personnel responsible for cleaning with information about relevant preventive measures to avoid spread of coronavirus in the working environment;
- Train the employees in proper use and further storage/removal of personal protective equipment and disinfectants;

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2

- Depending on their work specificity, provide the employees with necessary personal protective equipment (protective clothing, protective shoes, helmet, gloves, respirator) and establish control on their use;
- Periodically, several times a day ensure natural ventilation of closed spaces/facilities;
- At certain periodicities disinfect frequently used working equipment and working places;
- Maintain ergonomics at construction site. Ensure timely cleaning of working space and timely disposal of construction waste.
- For employees and visitors ensure closed containers for used disposable tissues and other used hygienic waste in the working space.

Employees' responsibilities

Ensuring proper hand hygiene regularly and thoroughly is the best way to be protected from most of the viruses. Therefore, it is necessary to take the following measures in the workplace:

- Follow hygiene rules in your workplace;
- Carry out the working process in accordance with emergency situations action plan defined by employer/occupational safety manager;
- When greeting do not shake hands and avoid contact with others (touching etc.);
- Avoid gatherings, it is recommended not more than 10 people in one working platform by keeping a safe distance (at least 2 m);
- While performing your work, fully use personal protective equipment provided by the employers;
- Treat with disinfectants the working places and tools used in the course of the work;
- Before and after taking meals, before and after using the restrooms thoroughly wash your hands with soap and water. After washing dry your hands well;
- If you can not wash and dry your hands, use alcohol-based hand sanitizers;
- Keep safe distance (at least 2 m);
- While coughing or sneezing, cover the face with a clean tissue or elbow and place used dispensable tissue in the waste bin;
- Avoid touching your eyes, nose and mouth with your hands.



ANNEX G: ENVIRONMENTAL AND SOCIAL COMPLIANCE AUDIT REPORT

Draft Environmental and Social Compliance Audi

Project Number: 43405-026
July 2020

GEORGIA: L2807: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM

Anaklia Water Supply and Sewerage Distribution Networks (ANA-01)
Updated

Sewage Network Connection & Water Network Works of Anaklia and Ganmukhuri
(VO#8, ZUG-01 Project)

October 2014
Updated July 2020

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1. INTRODUCTION

1. This report is an Environmental and Social Compliance Audit of construction activities carried out under Variation Order #4 and Variation Order #8: Construction of Water Supply System in Zugdidi (ZUG-01), implemented under "Urban Services Improvement Investment Program" Tranche 4 and envisages construction of additional Sewage Network Connections and Water Supply Network of Anaklia. Due to the fact that these are the similar construction activities, which are implemented in the same geographical area it was decided to update the existing Environmental Compliance Audit report prepared in October 2014 under USIIP for Anaklia Water Supply and Sewage Distribution Network project. This report describes the impact associated only with environmental and social issues¹ caused by construction works within the framework of VO # 4 which was approved by ADB (No Objection is presented in Annex 1) and VO # 8 addition to VO #4 (the differences are given in Annex 2) of the ZUG-01 sub-project (USIIP Tranche 4).

2. This Environmental and Social Compliance Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including safeguards requirement and aims to identify the impact of construction activities that related to environment and social issues. The specific objectives of the audit can be summarized as follows:

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

¹ The original Audit Report prepared in October 2014 didn't include social impact issues under the project USIIP/T2

2. PROJECT DESCRIPTION

2.1. Brief subproject description

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

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

5. Tranche 2² of the Investment Program includes the following sub-projects:

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

6. Tranche 4³ of the Investment Program includes the following sub-projects:

- Construction of Water Supply System in Zugdidi (Zug 01 - Contract No: P43405-ICB- Zug-01)
- Construction of Sewerage System in Poti (Pot-01)
- Construction of Wastewater Treatment Plant in Poti (Pot-02)
- Construction of Water Supply System in Jvari (Jvari-01)
- Construction of Sewage Collection and Water Supply System in Gudauri (GUD-02)

² Anaklia Water Supply and Sewerage Distribution Network project was implemented in 2012-2014 under USIIP/T2

³ Construction of Additional Sewage distribution network and Pumping stations in Anaklia was implemented under USIIP/T4

7. The sub-project Anaklia Water Supply and Sewerage Distribution Networks is the first stage of the Anaklia project. The following activities have been implemented under the mentioned stage:

- Installation of 66.7km Anaklia and Ganmkhuri water supply network, including the installation water supply pipelines, 1018 water service connections/meters and 1 water booster pump (works have been completed and delivered on April 30, 2014);
- Installation of Anaklia and Ganmkhuri sewerage network, including placement of 70.1 km water supply pipelines, 1018 sewerage connections and the installation of 42 sewerage pump stations (works have been completed and delivered on May 7, 2014);
- Construction of the service center building (completed and delivered on April 30, 2014).

2.2. The Compliance Audit Report ANA-01, USIIP Tranche 2 (2014)

8. Within the scope of the ANA-01 project Compliance Environmental Audit was conducted on 15-25 August, 2014. The Compliance Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including Safeguards Requirement and aims to identify past and present concerns from the production and business activities of Project Company that related to impacts on environment. Determines were actions in accordance with ADB and Georgian legislation requirements and prepare a Corrective Action Plan ("CAP") containing necessary remedial actions, approximate budget and time frame for resolution of any noncompliance.

9. The Environmental Compliance Audit of Anaklia Water Supply and Sewerage Distribution Networks was done in several stages:

- At stage one so called table audit was conducted and the available materials were studied;
- At stage two, the meetings with the Project participants with different degrees of responsibility for meeting the environmental requirements and monitoring were held;
- At stage three, visit to the site and collection of evidences was accomplished.

10. Based on the projects documents review and conducted site visits the Consultant revealed the following general findings:

- I. The main beneficiaries of the improved system were the citizens of Anaklia, and Ganmkhuri who was provided with a constant supply of better quality water, which serves a greater proportion of the population, including urban poor (and tourists as well). This improve the quality of life of people as well as raising standards of both individual and public health as the improvements in hygiene reduced the incidence of disease associated with poor sanitation. This lead to economic gains as people away from work less and will spend less on healthcare, so their incomes will increase;
- II. In terms of environment at the project implementation stage strong negative impact on environment was not expected. According to the ADB instructions the project fell under Category B. According to Georgia legislation Environmental Impact Assessment document preparation and obtaining relevant permit was not necessary for project implementation;

- III. No incidents have occurred during the construction stage and no complaints have been initiated by the residents;
 - IV. All project implementing units had hired environmental specialists with relevant qualifications;
 - V. Under the project UWSCG and SC environmental specialists performed permanent environmental monitoring. Non-compliances identified by them adequately and corrective actions were planned. The effectiveness of corrective actions were also controlled by the above-mentioned specialists;
 - VI. Restoring works on the territory of water supply and sewerage pipes and pumping stations have been performed to the satisfactory level, except for the two sections where the damaged asphalt cover has been restored at the unsatisfactory level; These sections have since then been restored as well (following instruction by EPTISA to Contractor to carry out the works in these 2 sections);.
11. Environmental Compliance audit report conducted within the scope of ANA-01 project (USIIP/T2) is presented in Annex 3 of this report.

2.3. Need of project (VO #8)

12. Anaklia and Ganmkhuri Sewage System Construction/Rehabilitation sub-project as an addition of the Zugdidi Water Supply System construction Project (ZUG-01-SEC-02) was necessary in connection with the measures that must be taken to commission ANAKLIA Wastewater Treatment Plant, built under the REG-02 project (USIIP / T2).

13. In case the flow of polluted wastewater in inlet collector of ANAKLIA treatment plant is by 30% less than the flow of 2339 m³/day envisaged by the first stage construction project for year 2020, the achievement of indicators of quality of treated water required under Georgian legislation and design cannot be guaranteed.

2.4. Implemented Construction Activities under VO#8 of ZUG-01 sub-project

Additional Connections to main sewer line

- a. Connection of residential houses in Ganmkhuri resort to main sewer line: l=11497m, n=359 houses;
- b. Connection of residential houses in Anaklia resort to main sewer line: l=5778 m, n=212 houses;
- c. Installation of pumps of previously constructed Pumping Stations with electrical connection and installation of automation cabinets for them – 20 pieces; Purchase and installation of pumps with automatics 4 pieces.
- d. Connection of two apartment buildings of the Ministry of Internal Affairs with self-flowing corrugated pipeline – d=200 mm, l=211.

Installation of Pump Stations

- e.** Installation of # 22 Pump Station (PS) and connection to existing pressure pipe (d=160 mm) for backflow to new Sewage Treatment Plant in Ganmukhuri
- f.** Installation of # 33 Pump Stations (PS); Arrangement of pressured pipeline (d= 355 mm, l= 1813m) and connection to existing l= 2400m same pipe; Arrangement ramp connection on the main channel with a steel casing pipe (d=630mm / 9mm, l= 21m) and 13 overpasses above the d=1m small drainpipes with a steel casing pipe (d=630mm / 9mm, l= 8m) in Anaklia

Rehabilitation of Water Supply and Sewerage Distribution Network

- g.** Installation of a new sewer pressure pipe (d= 160 mm, l= 206m) with a steel casing pipe (d=325mm / 6mm, l= 6m) to connect the "Anaklia" Hotel, crossing the ditch and road.
- h.** The existing water supply – d=250mm rehabilitation and replacement was carried out using d= 200 mm, l= 940m of the new pipeline.

2.5. Location

15. Anaklia is a seaside resort in western Georgia, located on the southeastern coast of the Black Sea, on the left side of the Enguri River where it flows into the Black Sea, in the central part of the Colchis lowland. Ganarjis Mukhuri, also known as contracted form: ganmukhuri is a village, located opposite to Ananklia, on the right side of the Enguri River. Both of them are located in the Samegrelo-Zemo Svaneti region, near the administrative border with Abkhazia.

16. Anaklia and Ganmukhuri are the part of Zugdidi district of Georgia, and its center, city of Zugdidi is 30 km away from Anaklia and 25 km from Ganmukhuri. Zugdidi is located in the western part of the country in the Georgian historical province of Samegrelo, approximately 346 km west of Tbilisi, the capital of Georgia. The Zugdidi is a capital of Samegrelo-Zemo Svaneti region, the fifth largest city of Georgia and is located on the left bank of the Chkhoushi River.

Map 1. Location of Anaklia and Ganmukhuri

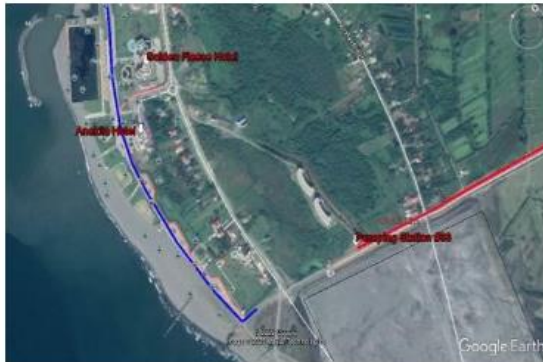


17. Coordinates and location of the main sewage system and two pumping stations under the ZUG-01 sub-project is presented on the Map 2, Map 3 and Map 4 below.

Map 2: Location of Pumping Station #22
GANMUKHURI PS #22 42°23'57.48"N 41°33'23.45"E

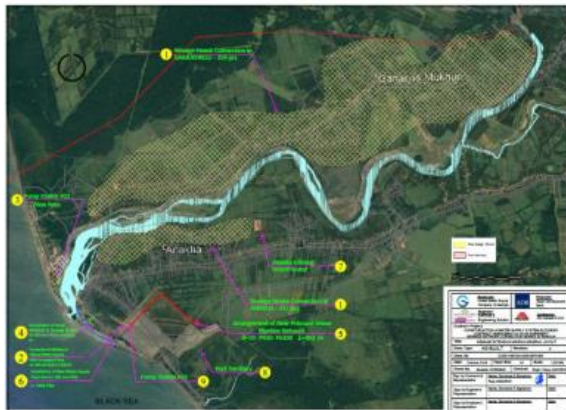


Map 3: Location of Pumping station #33
 ANAKLIA PS #33 42°23'18.56"N 41°34'19.29"E



18. Layout of Anaklia & Ganmukhuri sewage system is provided in the Map 4 below.

Map 4. Main Sewage System of Anaklia & Ganmukhuri



2.6. Agencies Involved in USIIP, Tranche 2 and Tranche 4

19. The following agencies are involved in implementing the Investment program: Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) responsible for management, coordination and execution of all activities funded under the loan. MoRDI has overall responsibility for compliance with loan covenants.

20. 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. Investment Program Management Office (IPMO) – is Projects Management Department under UWSCG. A Department of Environmental Protection and Permits also established under UWSCG.

21. UWSCG as responsible IA for the project recruited a Supervision Consultant (SC) – Safege under USIIP/T4. 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.

22. 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/Safege. SC/EMS conducts routine observations and surveys, prepares quarterly environmental reports and submits these to UWSCG.

23. 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

24. The environmental specialist (ES) is hired by UWSCG under the USIIP to assist and advise the DEPRP in USIIP program implementation in compliance with the ADB Safeguard Policy Statement 2009 and National Legislation, and oversee the work of DCs and SCs in safeguards compliance. ES supports DEPP 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.

25. DEPP 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 3 specialists, those are responsible for resettlement, environmental protection and construction permission issues.

26. A list of main organizations and persons involved in the implementation of ZUG-02 subproject under USIIP/T4 and relating to environmental and social safeguards is presented in **Table 1** below.

Table 1: Agencies involved in ZUG-01 subproject implementation

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Lender	Asian Development Bank	Head Office, Environmental Specialist, Portfolio, Results, Safeguards and Gender Unit (PSG), CWRD.	Nurlan Djenchuraev E-mail: ndjenchuraev@adb.org
		Georgian Resident Mission	Nino Nadashvili Tel: +995 595 070442 E-mail: nnadashvili@adb.org
		ADB RETA International-Regional Environmental Consultant	Keti Dgebuadze Tel: +995 577232937 E-mail: ketdgeb@yahoo.com
		Principal Social Development Specialist (Safeguards)	Michael J. Beauchamp E-mail: mbeauchamp@adb.org
		Social Development Specialist (Safeguards)	Sona Poghosyan E-mail: sonapoghosyan@adb.org
		Social Safeguards RETA consultant	Giga Gvelesiani +995 577382213 E-mail: ggvelesiani@gmail.com

Borrower	UWSCG	Head of Environmental and Resettlement Departmen	Maka Goderdzishvili Tel: +995 599 229925 E-mail: M.goderdzishvili@water.gov.ge
Borrower	UWSCG	USIIP Environmental Consultant	Ketevan Chomakhidze Tel:+995 577 380309 E-mail: chomakhidzek@yahoo.com
Supervision Consultant	SAFEGE (France) with Engineering Solution LLC (Georgia)	Environmental Specialist:	Mr. Shalva Bosikashvili Tel:+995 595116041 E-mail: sbosikashvili@yahoo.com
Supervision Consultant	SAFEGE (France) with Engineering Solution LLC (Georgia)	Social Specialist:	Ms. Gvantsa Lukava Tel: +995 577570520 gvantsa.lukava@hotmail.com
Contractor ZUG-01	AS Inshaat-N LLC (Azerbaijan)	Environmental, Social and H&S Specialist	Mr. Nodar Usupishvili Tel:+995 577 68 16 71 E-mail: n.usupashvili@gmail.com

3. SUMMARY OF ENVIRONMENTAL MONITORING DURING THE PROJECT IMPLEMENTATION PROCESS

3.1 Environmental Management Plans, Conducted Environmental Audits

27. All environmental management plans (e.g. Waste Management Plan, Health and Safety Plan requested under the IEE have been prepared by the Contractor AS Inshaat-N LLC (Azerbaijan), endorsed by SC/Safege and approved by the UWSCG. No SEMP was prepared by contractor under the VO#8 of ZUG-01 sub-project before commencement of construction activities.

28. Environmental team involved in the project implementation process has performed environmental monitoring of the project zone. Detailed information related to the schedule and involved organizations given in the **Table 2** below.

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

#	Project	Organization	Date
1	ZUG-01, VO#4	Environmental Specialists of Contractors under ZUG-01 project	Day-to-Day Site Inspection
2	Site Monitoring and Inspection	Environmental specialist of Supervisio Consultant Safege	Regular monitoring of site (Please see table 3 below)
3	Site Audit	Environmental Specialists of Contractors under Environmental specialist of USIIP; environmental specialists of Safege;	1 July and 9 July 2020

29. During the regular monitoring and inspection of the implementation of the above mentioned activities under VO#8 of ZUG-01 sub-project 11 non-compliances have been revealed related to the EH&S issues, out of which all of them were corrected until 1 July 2020. The list of main non-compliances and status of implementation of corrective actions are given in the **Table 3** below.

Table 3: Lis of non-compliances revealed during site visits

Construction Site	Environmental Issues	Action taken
	- Safety signs/tapes and trench side barriers around all trench should be installed	Completed
	- All construction materials should be properly segregated and stored adequately	Completed
	- "Hazardous Waste" container should be properly labeled	Completed
	- Construction waste materials should be removed from the site timely and permanently	Completed
	- All containers of fuel and lubricants should be placed in a better organized place and managed properly	Completed
	- Soil for backfilling purposes should be stored properly	Completed
	- Tarpaulins cover during materials transportation should always be used	Completed
	- PPE equipment should be used always and completely by all workers	Completed
	- Site internally should be arranged properly and cleaned regularly	Completed
	- Dust prevention measures should be actively implemented having a dry season (permanent watering needed)	Completed
	- All containers of fuel and lubricants should be placed in a better organized place with roofing and managed properly	Completed

3.2. Inspection, Monitoring and Reporting

30. The non-compliances that were mainly revealed by the SC and UWSCG specialists were reflected in monthly progress and quarterly monitoring reports. Corrective action plans were prepared by the contractor for each non-compliance and the quality of performance of corrective actions were controlled by SC.

4. PROJECT SITE VISIT FOR PERFORMANCE OF ENVIRONMENTAL AND SOCIAL AUDIT OF VO#8, ZUG-01 SUB-PROJECT

31. Site visit for Environmental and Social Audit took place on 1 July 2020 and 8-10 July 2020. About 22 sites were visited during this visit. As we have mentioned, the project fell under Category B. The entire project line was passing on the settled territory that is under the high anthropogenic impact. Given the technical design main problems that could have merged following the end of construction were as follows: disposal of waste soil (inert waste) and implementation of restoring works (project corridor). Meetings with local people were also held during the visit to find out how satisfied they were with the implemented projects (Photos of meeting is presented in Annex 4).

4.1. Disposal of Inert Waste

32. Quite large amount of inert waste is produced during the process of placing sewer pipes. Large amount of the mentioned waste is used for filling the tranches, after the placement of the pipes. At the construction stage, about 15,000 m³ of inert waste was produced, which was disposed of in a specially designated place by the local government.

4.2. Restoration Works

33. For the audit of the quality of restoration works performed by the contractor the site audit was conducted to the sewerage network and pumping stations #22 (located in Ganmukhuri) and #33 (located in Anaklia).

34. Restoration works on the territory adjacent to pumping stations have been performed to different degrees, predominantly to the satisfactory level (**Figures 1, 2**).

**Figures 1: Reinstatement activities,
Ganmukhuri – Installed # 22 Pumping Stations (PS # 22).**



**Figures 2: Reinstatement activities,
Anaklia – Installed # 33 Pumping Stations (PS # 33);**



35. For the audit of the quality of restoration works performed by the contractor the site audit was conducted to the sewerage network in Anaklia and Ganmukhuri. The tracks of placement of pipes have been restored well. Satisfactory restoration works by the Contractor are facilitated by Anaklia climate conditions as well, specifically, damp climate promotes fast growth of grass (**Figures 3**).

Figure 3. Restoration Works for installation of pipes in urban area of Anaklia and Ganmukhuri





36. Furthermore, under the project the residents were connected to the sewerage system. During the audit the quality of the restoration works of the trenches dug for laying the pipes to up to 571 families were inspected. At all those sections the consultant visited, the quality of restoration works was satisfactory (Figures 4).

Figure 4. Restoration Works for installation of pipes in private yards of the families



Connection of residential houses in Ganmukhuri resort to main sewer line: $\varnothing=11407m$, $n=359$ houses; Rustaveli street.



Connection of residential houses in Anaklia to main sewer line. Corrugated $d=150\text{mm}$ sewer pipe. Pirosmani street.



Connection of residential houses in Anaklia resort to main sewer line. Corrugated d=150mm



Connection of residential houses in Anaklia resort to main sewer line. Corrugated d=150mm sewer pipe. Rustaveli street.



Connection of residential houses in Anaklia resort to main sewer line. Corrugated $d=150\text{mm}$ sewer pipe. Pirosmani street.

37. During the Audit of the pressured pipeline ($d= 355 \text{ mm}$, $l= 1813\text{m}$) and connection to existing $l=2400\text{m}$ same pipe, it was revealed that open part of penoplastic pipe should be totally closed by steel casing pipe.

Figure 5. Installation of pressured pipeline



Arraignment of pressured pipeline ($d= 355 \text{ mm}$, $l= 1813\text{m}$) and connection to existing $l= 2400\text{m}$ same pipe; Arraignment ramp connection on the main channel with a steel casing pipe ($d=630\text{mm}$ l 9mm , $l= 21\text{m}$)

38. During the audit of pumping stations N22 and N33, it was revealed that iron cover of the pumping stations should be properly locked.

23

Figure 6. Pumping Station N22



Figure 7. Pumping Station N33



39. Three iron covers of small size underground manholes adjacent to the pumping station N33 should be of a proper size.

24

Figure 8. Underground Manholes in the vicinity of the PS N33



40. According to the design with the purpose of installation of sewerage pipes on many locations it was necessary to dig trenches on the motor road, mainly on Anaklia main street, respectively, it was necessary to damage the existing asphalt layer. During the audit the quality of damaged asphalt restoration works is satisfactory near the Anaklia Hotel and this layer fully covered damaged sections of asphalt (Figures 8).

Figures 9: Restored asphalt layer near the "Anaklia" Hotel



The existing water supply – d=250mm rehabilitation and replacement was carried out using d= 200 mm, l= 940m of the new pipeline, the old one was not removed and remains as a backup pipeline. Anaklia – seaside.

25



The existing water supply – d=250mm rehabilitation and replacement was carried out using d= 200 mm, l= 940m of the new pipeline, the old one was not removed and remains as a backup pipeline. Anaklia – seaside.



The existing water supply – d=250mm rehabilitation and replacement was carried out using d= 200 mm, l= 940m of the new pipeline, the old one was not removed and remains as a backup pipeline. Anaklia – seaside

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41. The degree of restoration of damaged asphalt layer on sections between the "Anaklia" and "Golden Fleece" hotels, due to lack of space and incompatibility with other underground utilities 110 meter length 0.8 meter width tranche was cut directly on the road shoulder; therefore, asphalt restoration work was carried out at this location, but the quality of restoration works of this section of the road is unsatisfactory (Figures 9).

Figure 10. Unsatisfactory asphalt restoration works



42. **Recommendation:** In case the laying of new asphalt on the mentioned section is not planned under another project contractor has to restore the mentioned section within one month from the receipt of audit report; the draft audit report will be shared with the Local Government and officials.

28

5. SOCIAL ISSUES DURING THE CONSTRUCTION WORKS UNDER THE VO # 8 OF THE ZUG-01 PROJECT

43. As it was mentioned above, the following new construction works have been added in the framework of the VO#8 of ZUG-01 project:

- Installation of an additional sewerage network;
- Connection of the 571 individual houses;
- Assembling of two new pumping stations;
- Installation of pumps for previously constructed Pumping Stations with electrical connection and installation of automation cabinets for them;
- Connection of two apartment buildings of the Ministry of Internal Affairs with self-flowing corrugated pipeline;
- Connection of the "Anaklia" Hotel with new sewer pressure pipe;
- Rehabilitation and replacement of existing water supply pipelines;

44. The project was implemented on the settled territory of Anaklia and Ganmukhuri resorts, therefore, to determine the compliance of the construction works with the ADB SPS 2009 requirements in regard of social impact, an additional site visit was conducted on July 8-10, 2020 and all the territories, where the new construction activities took place were identified.

45. During the site visits a number of meetings were conducted with the representatives of local governments and community members and it was clarified that majority of the population is fully satisfied with the implemented activities under VO #8 of ZUG-01 Sub-Project, but in few cases some problems revealed with the house connections related to the difficult relief of the region. In particular, with the connection of pipes for individual houses to the main collector built in 2013-2014.

46. **Recommendations:** The contractor should conduct the survey regarding above mentioned issue and submit a relevant report to UWSCG.

5.1. Land Acquisition and Resettlement Impacts

47. Given the circumstances that the construction activities under VO#8 of ZUG-01 sub-project were made on municipal roads and/or state owned land, which were not used for agricultural or other purposes, no LAR/LARP issues were involved. Below in the paragraphs is given the detailed information about each component.

29

5.2. Rehabilitation of an existing and installation of an additional pipelines

48. The construction/rehabilitation works of the water and sewage pipelines were conducted on the public, municipal, or internal access roads, therefore there was no impact on private properties.

The table below shows the breakdown of the pipelines constructed under VO#8

construction activities	Pipeline Type	Pipeline Length (m)	Pipeline Diameter (mm)
Connection of 359 residential houses in Ganmukhuri resort to main D-400 mm sewer collector	sewer	11497	
Connection of 212 residential houses in Anaklia resort to main D-400 mm sewer collector	sewer	5778	
Connection of two apartment buildings of the Ministry of Internal Affairs with self-flowing corrugated pipeline	sewer	211	200
Arrangement of pressured pipeline to connect N33 pumping station to the existing network	sewer	1813	355
Installation of a new sewer pressure pipe to connect the "Anaklia" Hotel	sewer	206	160
		6	325
Rehabilitation and replacement The existing water supply d=250mm pipeline	water	940	200

49. During the site survey local residents confirmed that individual connections of the sewerage networks have been implemented based on verbal agreements with the owners of houses/other customers.

The situational drawing of the constructed network is shown below



5.3. Installation of the pumps for the existing pumping stations

50. The new pumps are installed for the existing manholes (PS1; PS2; PS3; PS4; PS5; PS6; PS7; PS8; PS9; PS10; PS11; PS12; PS13; PS14; PS15; PS16; PS17; PS18; PS19; PS20; PS21; PS23; PS24; PS44), which are located on the state owned land. During the site visiting no actual usage of the land was identified.

5.4. Installation of two new pumping stations

51. Two new pumping stations (PS22 and PS33) were constructed under VO#8.

52. Pumping station N22 has been arranged on the part (41sq.m) of the land plot owned by Zugdidi Municipality. According to the order #716 (11/03/2020) of the Municipality, a two year granted usufruct procedures have been processed for the construction of the design pumping station. The situational drawing, order N716 and LEPL "Zugdidi Municipality" (c.c. 43.29.42.080) are given in annex 5.

53. Pumping station N33 has been arranged on the part of the state owned land (c.c. 43.30.41.769). The marking of the mentioned land and adding the required area for the PS33 to the assets of the company have been started with the National Agency of State Property of the Ministry of Economy and Sustainable Development. The situational drawing and LEPL of the land are given in annex 6. It should be noted that during the survey no actual usage of a land for agricultural or other purposes was identified.

54. In conclusion as all the infrastructure was arranged on the municipal or state owned territories there was no need for LAR/LARP preparation. No cases were reported under the GRM established and implemented by UWSCG (order N 196; October, 2018).

6. MAIN FINDINGS REVEALED DURING THE DOCUMENT REVIEWED AND SITE VISITS

55. Based on the projects documents review and conducted site visits the Consultant (Audit Team) revealed the following **general findings**:

- A. The main beneficiaries of the construction works under VO #8 were the citizens of Anaklia, and Ganmukhuri who were provided with improved sanitation system, which serves the local population, including tourists as well. This improve the quality of life of people as well as raising standards of both individual and public health as the improvements in hygiene reduced the incidence of disease associated with poor sanitation. This lead to economic gains as people away from work less and will spend less on healthcare, so their incomes will increase;
- B. In terms of environment at the project implementation stage strong negative impact on environment was not expected. According to the ADB instructions the project fell under Category B. According to Georgia legislation Environmental Impact Assessment document preparation and obtaining relevant permit was not necessary for project implementation;
- C. All documents developed under the project (Loan Agreement, PAM, Contracts) included the obligation to implement the project according to the ADB SPS 2009 as well as pursuant to the environmental requirements stipulated in Georgian legislation;
- D. GRM system was established but no incidents have occurred during the construction stage and no complaints have been initiated by the residents;
- E. All project implementing units had hired environmental and social specialists with relevant qualifications;
- F. At the project implementation stage permanent trainings were held for contractor, as well as those specialists of all organizations involved in the project that dealt with social and environmental issues;
- G. SC environmental and social specialists performed permanent environmental monitoring under the project. Non-compliances identified by them adequately and corrective actions were planned. The effectiveness of corrective actions were controlled by the above-mentioned specialists;
- H. Restoring works on the territory of sewerage pipes and pumping stations have been performed to the satisfactory level, except one section where the damaged asphalt cover has been restored at the unsatisfactory level;
- I. Contractor has disposed inert waste on the territory adjacent to the Anaklia city central street, in agreement with local self-government; the local authorities use the mentioned inert waste for restoring the boggy and uneven territories adjacent to the central road;
- J. Several public meetings have been carried out during the preparation of Audit report with the representatives of the local government and community members; During the site visits it was clarified that majority of the population is fully satisfied with the

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implemented activities under VO #8 of ZUG-01 Sub-Project, but in few cases some problems revealed with the house connections related to the difficult relief of the region. In particular, with the connection of pipes for individual houses to the main collector built in 2013-2014.

7. RECOMMENDATIONS

56. Along with the above-mentioned findings the following recommendation were made within the environmental and social audit report, which contractor should improve within the two weeks after receiving the audit report:

- Proper asphalt restoration works near the "Anaklia" Hotel;
- Arrangements of the lockers for the iron covers of PS #22 and PS #33;
- Arrangement of steel casing pipe for pressure pipe;
- Arrangement of proper ductile iron cover for the manholes near the PS #33;
- Conduct the survey regarding the issue of individual house connections and submit a relevant report to UWSCG.