

Semi-annual Environmental Monitoring Report

#12 Semiannual Report

(Reporting Period: July-December 2021)

Project Number: 43405-029

**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

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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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1. 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 July-December2021.
2. This report is the 12th Semi-Annual EMR for the T4 of USIIP.

1.2 Headline Information

3. During the reporting period, construction work was carried out under the JVA-01, POT-01, POT-02 and GUD-02 sub-projects and therefore this report describes the activities performed within the framework of these projects.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

4. 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.
5. 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.
6. Tranche 4 of the Investment Program includes:
 - Construction of Water Supply System in Zugdidi (Zug 01 - Contract No: P43405-ICB- Zug-01)
 - Construction of Sewerage System in Poti (Pot 01 - Contract No: P43405-ICB-Pot-01)
 - Construction of Wastewater Treatment Plant in Poti (Pot 02 - Contract No: P43405- ICB-Pot-02)
 - Construction of Water Supply System in Jvari (Jvari 02- Contract No: P43405-DC- Jvari-01)
 - Construction of Sewage Collection and Water Supply System in Gudauri (UWSCG- ICB-GUD-02-2028-GUD-02)
7. **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.
8. 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 October 2021 due to the additional construction works under VO#4 and VO#8, including construction of additional sewage network, connection of residential houses to the main collector and Installation of additional sewage Pump Stations in Anaklia. Post Construction Audit will be conducted during the next reporting period by the Supervision Company SAFEGE and main findings and recommendations of Audit report will be presented in the next SAEMR, January-June 2022.

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. Contractual date finished on July 2020 and Contractor is continuing works under Delay Damages, In case of agreement with Employer and ADB potentially Contract can be finished by the December 2022.
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)”. Contractual date finished on August 2020 and Contractor is continuing works under Delay Damages, Potential completion of Contract can be considered end of December 2021.
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). Contractual date finished on December 2019 and Contractor is continuing works under Delay Damages, Potential completion of Contract can be considered end of December 2021.
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 initial date of completion of the contract was April 2021 and further extended until the end of December 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 main institutions that are involved in implementation of the EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environment Protection and Agriculture (MoEPA).
17. The Investment Program Management Office (IPMO) under UWSCG, which was renamed in November 2021 from the Project Management Department to the Donor Funded Project Management Department, is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist who is responsible for managing the environmental aspects of the USIIP. The head of the department was also replaced, and Ms.Irina Chikhladze was appointed as Acting Head of the Department instead of Ms.Ana Onashvili.
18. The IPMO Environmental Specialist (Ms. Kate Chomakhidze) responsibilities in respect of implementation of the EMP are as follows:
 - (i) Approve the Site Specific Environmental Management Plan (SSEMP) before Contractor takes possession of construction site;
 - (ii) Monitor implementation of EMP and ensure the environmental safeguards compliance;
 - (iii) Review the updated IEE and/or SEMP and send it for clearance to ADB;
 - (iv) Ensure that contractors have access to the EMP and IEE report;
 - (v) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website;
 - (vi) Review and approve the Corrective Action Plan and provide to ADB for review and comments if any;
 - (vii) Participate in public consultations during project implementation;
 - (viii) In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints;
 - (ix) Assist in organizing trainings for the Contractors in coordination with ADB/RETA consultant;
 - (x) Participate in external trainings in environmental management and environmental auditing
19. The SC include a full time Environmental Specialist (Mr. Shalva Bosikashvili) to assist the IPMO supervise and monitor implementation of the EMP during construction.
20. The Contractors also appoints a full time Environmental specialists, (please see list of environmental specialists of CC in table 2 - below) to be a senior member of the construction management team based on site for the duration of the contract. The ES has a university degree (preferably at Masters level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project
21. Department of Environmental Protection and Permits of UWSCG will work together with IPMO on addressing the Environmental Safeguard issues of USIIP sub-projects. More detailed description of implementation arrangements, responsibilities and staffing are provided in the Table 1 below.

Table 1: Institutionnel Arrangement, Responsibilities and Staffing

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Environmental Protection and Permits Department (Environmental Specialist)
1	Environmental planning and management Contractors Environmental Management Plan (site-specific EMP)	Prepare Specific EMP (SEMP) with supplemented Topic Specific EMPs at pre-construction stage based on IEE/EMP Implement SEMF approved by IPMO.	Review and endorse the SEMF; Monitor implementation of SEMF on daily basis; Monitor monthly environmental monitoring reports or results prepared by the Contractor and report to IPMO.	Review and approve the SEMFs; Monitor implementation of EMP and ensure the environmental safeguards compliance.	Work together with IPMO on addressing the environmental non-compliance issues, if any.
2	Changes in design	Provide details of design changes to CSC required to update IEE/EIA, or SEMF; Implement updated SEMF.	Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMF.	Review the updated IEE and/or SEMF and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMF; Upload the approved IEE/SEMF provided by IPMO to UWSCG website for Public Disclosure.
3	Unanticipated impacts	Inform CSC about unanticipated impact and follow the instructions received from IPMO.	Make environmental assessment of the unanticipated impact and update the IEE and/or SEMF	Review the updated IEE and/or SEMF and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMF

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Environmental Protection and Permits Department (Environmental Specialist)
4	Reporting	Prepare monthly environmental monitoring reports and send it to CSC and IPMO	<ol style="list-style-type: none"> 1. Prepare inputs to environmental part of quarterly construction progress reports; 2. Prepare inputs to semi-annual environmental monitoring report (SAEMR) to be submitted to IPMO for further review, comments and improvement. 3. Conduct Post-Construction Final Environmental Audit and prepare final environmental audit report. 	<ol style="list-style-type: none"> 1. Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; 2. Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website. 	Upload the approved reports (ENG and GEO) provided by IPMO to UWSCG website for Public Disclosure
5	Permits and clearances	NA	NA	NA	Obtaining environmental permits and clearances
6	Non-compliances	Prepare a corrective action plan (CAP)	Assist contractor in preparing the CAP.	Review and approve the CAP and provide to ADB for review and comments if any.	
7	Public consultations	Participate in public consultations during project implementation	Organize public consultations: inform people about activities and prepare the record of consultations.	Participate in public consultations during project implementation	UWSCG & IPMO host PCs, CSC will present the topics related to environmental issues

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Environmental Protection and Permits Department (Environmental Specialist)
8	Grievance Redress Mechanism	Project site Focal person to record environmental grievances in the logbook and follow up with UWSCG established practice for grievance redress	<ol style="list-style-type: none"> 1. Ensure that grievances, if any, are being properly documented and addressed timely and effectively. 2. Assist IPMO to develop consolidated GRM database and consolidation of GRM cases both for ENV and Social safeguards 	In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints; Assist IPMO Social/Resettlement Consultant in GRM database consolidation and data analysis.	UWSCG maintains GRM applicable to all projects. UWSCG will ensure IPMO information on grievances is consolidated into the UWSCG grievances (both - environmental and social) without duplication.
9	Trainings	Attend on-site trainings organized by IPMO and ADB/RETA Consultant	Assist the IPMO in organization of trainings for the Contractors on environmental safeguards requirements.	Organize trainings for the Contractors in coordination with ADB/RETA consultant. Participate in external trainings in environmental management and environmental auditing	Participate in external trainings in environmental management and environmental auditing

22. A list of main organizations involved in the USIIP/T4 and relating to environmental safeguards is presented in Table 2 below.

Table 2: 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	Country Environmental Focal	Ninette R. Pajarillaga E-mail: npajarillaga@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: +995577232937 Kdgeuadze.consultnat@adb.org
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. Irine Chikhladze Tel: +995 598 179898 E-mail: i.chikhladze@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.Beka Khachidze Tel: +995 599 346 821 E-mail: r.kalandadze@yahoo.com
Contractor POT-02	JV "Pfeiffer - EMIT" comprised by "Ludwig Pfeifer Hoch – and TiefbauGmbH7Co. KG (Germany)" and "EMIT Group – ErcoleMarelliImpiantiTecnologiciS.r.l. (Italy)	Environmental Specialist H&S Specialist	Mr.Nikoloz Neparidze Tel: +995 599 346 821 E-mail: nikoloz.neparidze@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

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
GUD-02	“China Nuclear Industry 23 Construction Co.” LTD (CNI23)	Environmental H&S Specialist	Mr. Aleksandre (Sasha) Mchedlishvili Tel: +995 574 02 77 33 E-mail alexandermchedlishvili1@gmail.com

2.3 Project Activities during Current Reporting Period

23. During the reported period construction activities were carried out under POT-01, POT- 02, JVA-01 and GUD-02 sub-Projects, therefore these sub-projects are reported in this Semi-annual EMR. Contractor 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.
24. Information about the construction work under USIIP/T4 during the reporting period – July-December 2021 is presented in the Table 3, Table 4, Table 5 and Table 6 below.

POT-02 Sub-project

25. The main activities under POT-02 sub-project during the reporting period is presented in the table 3 below:

Table 3: POT-02, Project Progress during the July-December 2021

POT-02	July-December 2021	
Works undertaken during July- December 2021	Civil works for structures are completed 99%	During the reporting period was completed around 75% of civil works, including structures and installation of Mechanical equipment
	Mechanical and Electrical equipment arrived on site – 85%	
	Mechanical equipment installation – 30%	

POT-01 Sub-project

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

Table 4: POT-01, project progress during July-December 2021

HDPE PRESSURE PIPES PERFORMED ACTIVITIES	Completed Total (m)	Completed [%]	Width and Depth (Average) of Trench	Estimated Number of Days to Lay Pipes
Ø 110 (mm) : 3603	4071.84	100 %	0.9 – 1.0m	0m
Ø 140 (mm) : 790,00	642,8	81.36%	0.9 – 1.0m	0
@ 180 (mm): 480,00	480	100%	0.9 – 1.0m	0m
Ø 280 (mm) : 1094	1094	100%	0.9 – 1.0m	0m
Ø 315 (mm) : 935,00	736,7	78.8%	0.9 – 1.0m	0
Ø 355 (mm) : 4 272,00	3641.32	85.2 %	1.2m	110.9m
Ø 400 (mm) : 6,580,00	4889.83	74.3 %	1.2m	0m
Ø 450 (mm) : 1,075,00	483	44.9%	1.2m	483m
Ø 630 (mm) : 820,00	814.3	99.3%	1.4m	0
TOTAL = 18 574	16853.79	60.7%		593.9m
HDPE GRAVITY CORRUGATED PIPE IN LINEAR METER				
Ø 150 (mm) : 37 500,00	22618.1	60.3%	0.9 – 1.0m	1057.9m
Ø 200 (mm) : 57 000,00	19004.7	33.3%	0.9 – 1.0m	1154m
Ø 300 (mm) : 38 000,00	28399.9	74.7%	0.9 – 1.0m	923.7m
Ø 400 (mm) : 1,643,00	135.7	8.2%	1.2m	0m
Ø 500 (mm) : 1,739,6	939.7	54%	1.35m	173.7m
TOTAL = 135,882,06	71098.1m	52.3 %		3309.3m
Manholes:	Contract	Completed Total	Total Competed %	Executed During July-December
Concrete DN 1000	1440 pcs	578 pcs	40.1%	24 pcs
HDPE DN 600	1300 pcs	585 pcs	45%	26 pcs
HDPE DN 400	3030 pcs	2554 pcs	84.3%	152 pcs

JVA-01 Sub-project

27. The main activities under JVA-01 sub-project, carried out by contractor during the reporting period is provided in the Table 5 below:

Table 5. Project Progress during the July-December 2021 for JVA-01

Jvari	Jvari Water Supply System Construction	
Sites	Jvari Water Pipeline Network	
Jvari	Jvari Transmission Pipelines	Executed During July-December 2021
Works undertaken during July-December 2021	<p>Executed January 2021 – July 2021. Total Completed %: OD DCI 300 SDR7.4 - 4200m was laid-2817 67%</p> <p>Reservoir: Civil works completed 95% (Was ongoing repair works and tightness test for reservoirs) Pumping Station including reservoir and Transformer building: Civil works completed 70%</p> <p>Lia Well Field: Was ongoing repair works on Well houses</p>	452.5m

GUD-02 Sub-project

28. The main activities under GUD-02 sub-project, carried out by contractor during the reporting period is provided in the table 6 below:

Table 6: Project Progress during the July-December 2021 for GUD-02

GUD 02	Total Completed %	Executed During July-December 2021
Works undertaken	For GUD-02 Project was executed:	

GUD 02	Total Completed %	Executed During July-December 2021
during July-December 2021	1. Installation of Corrugated Pipe D-200 – 22000 m (Out of 22000); - 100%	2909m
	2. Installation of Concrete Manhole D 1000– 1549m;- 100%	305m
Works undertaken	3. Construction of Reservoir – 100 % (Civil Works and Pipe Connections)	During this period was executed all civil works (Reservoir, Guard House Chlorination building and Chamber)
during July-December 2021	4. Construction of Boreholes: N1Drilling - 100%: N2- 75% and N3- 85%	Borehole N1-Pipe installation Borehole N2- Drilling 220m Borehole N3-Drilling 310m

2.4 Description of Any Changes to Project Design

29. During the reporting period, no design changes were made to sub-projects under USIIP/T4.

2.5 Description of Any Changes to Agreed Construction methods

30. During the reporting period, no changes were made to the agreed construction methods for sub-projects under USIIP / T4.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

- 31.** Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis.
- 32.** Due to the coronavirus (COVID-19) outbreak in March 2020 and due to the fact that the World Health Organization (WHO) has declared the COVID-19 a global pandemic 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) which applies to all sectors of economic activity.
- 33.** An Emergency Management Plan was developed by SC for preventions of employees against the COVID-19 (please see Annex F). Also Health and Safety Plans, as well Site-Specific Environmental Management Plans were updated by contractors.
- 34.** The General Guideline for COVID-19 was also developed specifically for the construction sector by the Government of Georgia (Please see Annex E of this report) as well.
- 35.** 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.
- 36.** 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.
- 37.** Environmental Monitoring Specialist hired under the POT-01 sub-project by contractor Mr. Beka Khachidze conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.
- 38.** Environmental Monitoring Specialist hired under the POT-02 sub-project by contractor Mr. Nikoloz Neparidze conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.
- 39.** Environmental Monitoring Specialist hired under the GUD-02 sub-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.
- 40.** Environmental Monitoring Specialist of SC/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.
- 41.** 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-compliance Notice were required developed Semi-Annual Environmental Monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.

42. 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 7 below for JVA-01, POT-01, POT-02 and GUD-02 sub-projects.

Table 7: Parametric Measurement Guidelines

Parameters	Frequency & Location	Remarks	Statuses
USIIP/T4			
JVA-01			
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	Completed
Cultural heritage Disturbance to cultural resources	Every time, along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.	Completed
POT-01			

Parameters	Frequency & Location	Remarks	Statuses
USIIP/T4			
Air Quality	Every 6 months, across the sewerage network	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	Completed
Noise	Every 6 months, Reservoir #1, Sewerage Network	Ensure that all equipment & vehicles used for construction activity are in good condition. Limiting working hours to 8 am – 6 pm.	Completed
Cultural heritage Disturbance to cultural resources	Every time, along the alignment Archaeological & Cultural Properties	Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection.	Completed
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 ;	Completed


Parameters	Frequency & Location	Remarks	Statuses
USIIP/T4			
		SO2 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	Completed
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	Completed
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 ; NO2 Mg/m ³ ; SO2 Mg/m ³	Completed
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	Completed


Parameters	Frequency & Location	Remarks	Statuses
USIIP/T4			
Topsoil	Monthly, during the site monitoring.	Top soil of about 15 cm depth should be removed and stored separately in appropriate location and reinstated after completion of construction activities	Completed



3.2 Site Audits

43. 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 8 below.

Table 8. Summary of site audits



Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
Continuously during reporting period (July-December 2021)	AS Inshaat-N LLC (Azerbaijan) JVA-01	EH&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	Completed on the monthly basis
16 July 2021		Environmental Specialist of SC Mr. Shalva Bosikashvili USIIP environmental Specialist Ms. Kate Chomakhidze	Regular Monitoring of Sites	<p>Proper warning and safety signs should be provided at the perimeter of the construction site</p> <p>All safety norms must be protected at the construction area (Workers should be equipped with full PPE), please see photo below</p> <p>Photo No1 (Construction of Water Supply Network in Getia Street, Jvari)</p> 	Verbal Instruction was given to contractor to improve the situation.	Completed (30.07.2021)


Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				<p>In case of working on height, more than 1,5m. workers must use protective anti-dumping equipment, please see photo N1 below</p> <p>Photo No1 (Construction of water reservoir in Abasha)</p> 		Completed (30.07.2021)
15 September 2021		Environmental Specialist of SC Mr. Shalva Bosikashvili	Regular Monitoring of Sites	<p>Incorrect Surplus/waste soil management should be improved by utilizing surplus/waste soil for beneficial purposes such as backfilling or to raise the ground-level of low lying sites, please see Photo N1 below</p> <p>Photo N1 (Construction of Water Supply Network in Jvari)</p>	Verbal Instruction was given to contractor to improve the situation.	Completed (30.08.2021)

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
						
5 October 2021		Environmental Specialist of SC Mr. Shalva Bosikashvili	Regular Monitoring of Sites	<p>All safety norms must be protected at the construction area (Workers should be equipped with full PPE), Please see Photo N1</p> <p>Photo N1</p> 	Verbal Instruction was given to contractor to improve the situation.	Completed 10 October 2021

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
Continuously during reporting period (July-December 2021)	JV "Pfeiffer – EMIT" POT-02 Coordinates of WWTP construction site: X 719287 Y 4675750	EH&S Specialist of Contractor Mr. Nikoloz Neparidze	Day to day monitoring of sites. Compliance with Environmental and HES requirements	Poor housekeeping Safety issues on construction sites	Monthly Monitoring Reports	Completed on the monthly basis
19.10.2021		EH&S Specialist of Contractor Mr. Nikoloz Neparidze	Day to day monitoring of sites.	Site internally should be arranged properly and cleaned regularly.	Verbal Instructions were given to contractor to improve the situation	Completed (25.10.2021)
		Ketevan Chomakhidze UWSCG/USIIP Environmental Consultant		All construction materials and wastes should be properly segregated and stored adequately.		Non-compliance notice were issued to contractor (please see Annex C)
	Shalva Bosikashvili SAFEGE Environmental Consultant	Oil spill response kits should be placed at the appropriate locations.				Completed (25.10.2021)
				Area around the cherry picker without warning tape		Completed (22.10.2021)
				Lack of warning signs and warning tape along the open trenches		Completed (25.10.2021)
12 November 2021		Environmental monitoring specialists of	Regular monitoring of construction	Poor housekeeping on construction site	Verbal Instructions were given to	Completed (30.11.2021)



Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
		SC/Safege Mr. Shelve Bosikashvili	sites	Trench without warning tape, hard barriers at the deep excavations (more than 1.20m) should be Installed; arrange orange net or warning tape at the excavations lower than 1.20m	contractor to improve the situation Non-compliance notice were issued to contractor (please see Annex C).	Completed (30.11.2021)
17 December 2021		Environmental monitoring specialists of SC/Safege Mr. Shelve Bosikashvili	Regular monitoring of sites	In case of working on height, more than 1,5m. workers must use protective anti-dumping equipment. Poor housekeeping on construction site, site internally should be arranged properly and cleaned regularly.	Verbal Instructions were given to contractor to improve the situation Non-compliance notice were issued to contractor (please see Annex C)	Completed (05.02.2021) Completed (03.02.2021)
Continuously during reporting period (July-December 2021)	TAHAL Group BV POT-01	Environmental H&S Specialist of Contractor Mr. Beka Khachidze	Day to day monitoring of sites Compliance with Environmental and HES requirements	Poor housekeeping Safety issues on construction sites	Monthly Monitoring Reports Environmental Monitoring Checklist filled	

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
16 September 2021		Environmental Specialist of SC Mr. Shalva Bosikashvili USIIP Environmental Specialist Ms.Kate Chomakhidze	Monthly Monitoring of 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>Relevant traffic signs and flagmen should control traffic movement properly.</p> <p>PPE wearing is obligatory at the construction site.</p> <p>Open pits without hard barrier and warning signs, please see photo N1</p> <p>Photo N1</p> 	<p>Verbal Instructions were given to contractor to improve the situation</p> <p>Non-compliance notice were issued to contractor (please see Annex C)</p> <p>Corrective Action Plan was developed by contractor, please see Annex D</p>	<p>Completed (15.10.2021)</p> <p>Completed (15.10.2021)</p> <p>Completed (15.10.2021)</p> <p>Completed (15.10.2021)</p> <p>Completed (15.10.2021)</p> <p>Completed (15.10.2021)</p> <p>Please see photo N1</p> 

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				<p>Unsafe wiring should be improved on construction site, Please see Photo N2 below</p> <p>Photo N2 (Construction of sewerage network in Poti)</p>  <p>Contamination of construction area with solid waste</p>		
18 October 2021		Environmental Specialist of SC Mr. Shalva Bosikashvili	Regular Monitoring of sites	<p>All construction materials and wastes should be properly segregated and stored adequately</p> <p>Open trench (house connections) without any barrier and warning tape should be fenced and warning signs</p>	<p>Verbal Instructions were given to contractor to improve the situation</p> <p>Non-compliance notice were</p>	<p>Completed, November 2021</p> <p>Completed, November 2021</p>

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				Should be installed	issued to contractor (please see Annex C)	
11 November 2021		<p>Environmental Specialist of SC Mr. Shalva Bosikashvili</p> <p>Environmental H&S Specialist of Contractor Mr. Beka Khachidze</p> <p>USIIP Environmental Consultant Ms. Kate Chomakhidze</p>	Regular Monitoring of sites	<p>Oil spill response kits should be placed at the appropriate locations.</p> <p>Proper waste management. Waste containers without lid and label</p>	<p>Verbal Instructions were given to contractor to improve the situation</p> <p>Non-compliance notice were issued to contractor (please see Annex C)</p> <p>Corrective Action Plan was developed by contractor, please see Annex D</p>	<p>Completed 15 November 2021</p> <p>Not yet completed, contractor, final improvements should be done until mid. of February 2022, improved photos of sites will be presented in the next SAEMR, January-June 2022</p>

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				<p>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;</p> <p>Drip tray should be used for fuel spillage prevention.</p> <p>Relevant traffic signs and flagmen should control traffic movement properly. H&S standards and rules should be addressed and implemented.</p> <p>Unacceptable housekeeping; tripping & slipping hazard</p> <p>Damaged road signs on construction site, please see photo N2</p> <p>Photo N2 (Construction of water supply and sewerage network in Gudauri)</p>		<p>September 2021</p> <p>Completed in 22 September 2021</p> <p>Completed in 22 September 2021</p> <p>Completed in 22 September 2021</p> <p>Completed in 22 September 2021</p> <p>Completed in 18 September 2021</p> <p>Completed 25.11.2021</p>

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
						
17 November 2021		Monthly monitoring of sites	Monthly monitoring of sites	<p>Hazardous Waste container with relevant indication sign should be installed at the construction area</p> <p>Unacceptable housekeeping, Site internally should be arranged properly and cleaned regularly, please see photo N1</p> <p>Photo N1 (Construction of sewage system in Gudauri)</p> 	Non-compliance notice were issued to contractor and corrective actions were required to immediately improve the situation on sites under GUD-02 sub-project (Please see Annex C)	Completed 25.11.2021 Not yet completed, contractor, final improvements should be done until mid. of February 2022, improved photos of sites will be presented in the next SAEMR, January-June 2022

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				<p>Oil spill response kits should be placed at the appropriate locations.</p> <p>Generator without drip tray and without fire extinguisher lubricants/fuels should be placed in drip tray or banded area to 110% of volume stored.</p>		<p>Completed 25.11.2021</p> <p>Completed 25.11.2021</p>

3.3 Issues Tracking (Based on Non-Conformance Notices)

44. The contractors EHS performance are always reviewed by Supervision Consultant and IPMO. Necessary actions are undertaken when contractors are not in conformance and the EH&S issues.
45. Two Non-Compliance Notices have been issued during the site visits under 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 CAP and/or 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.
46. In case that the contractor did not make any improvements within the indicated deadline, IPMO / PIU always held additional meetings and discussions with contractors and Safege on how to correct the non-compliances. There are only a few (two) issues that have not yet been resolved during the reporting period, which are presented in the table 24 of this report. Since the deadline for improvements of above issues are set for the first half of February 2021, the main findings will be reflected in the next semi-annual EMR, January-June 2022.
47. A summary of the identified environmental issues under JVA-01, POT-02, POT-01 and GUD-02 sub-projects for July-December 2021 is presented in Table 9, 10, 11 and 12 below.

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

Total Number of Issues for Project	5
Issues Opened This Reporting Period	0
Issues Closed This Reporting Period	5
Percentage Closed	100%

48. As it is presented in table 9 above, there is no opened issues during this reporting period under JVA-01 sub-project, since all non-compliance identified during the reporting period were improved by contractor during the reporting period, July-December 2021.

Table 10: Summary of Issues Tracking Activity for Current Period - POT-02

Total Number of Issues for Project	10
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Total Number of Issues for Project	10
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	9
Percentage Closed	90%

49. As it is presented in table 10 above, one issues is still opened under POT-02 sub-project, which will be improved during the end of January 2022 and improved photos of sites will be presented in the next Semi-annual EMR, January-June 2022, these issue is following: (i) Oil spill response kits should be placed at the appropriate locations.

Table 11: Summary of Issues Tracking Activity for Current Period - POT-01

Total Number of Issues for Project	9
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	8
Percentage Closed	89%

50. As it is presented in table 11 above, one issue is still opened under POT-01 sub-project, which will be improved during the end of January 2022 and improved photos of sites will be presented in the next Semi-annual EMR, January-June 2022, these issue is following: (i) Proper waste management. Waste containers without lid and label.

Table 12: Summary of Issues Tracking Activity for Current Period - GUD-02

Total Number of Issues for Project	11
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	10
Percentage Closed	95%

51. As it is presented in table 12 above, one issue is still opened under GUD-02 sub-project, which will be improved during the mid of July 2021 and improved photos of sites will be presented in the next Semi-annual EMR, July-December 2021, these issue is as following: (i) Unacceptable housekeeping, Site internally should be arranged properly and cleaned regularly.

3.4 Trends

52. To identify trends in environmental issues, information from previous Semi-Annual EMR (July-December 2020) is used. The summary of the issues is provided in the Table 13 below.

Table 13: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
January-June 2021	110	96%	4%
July-December 2021	35	94%	6%

53. Most of the non-compliances were eliminated by the contractors within the specified time frame within the sub-projects POT-02, POT-0, JVA-01 and GUD-03. The required actions and deadline to improve the remaining inconsistencies are presented in table 24 below.
54. The UWSCG Department of Environment protection and Permits (DEPP) and its USIIP Environmental Specialist, Ms. Kate Chomakhidze, as well as IPMO / UWSCG had always discussed the inconsistencies and findings presented in Table 8 above with the contractor. In some cases, this has led to meetings to discuss non-compliances identified during the site visit and mitigation measures that need to be implemented immediately.
55. In cases contractor does not improve the situation to 100% on the sites within the proposed time frame, additional meetings and discussions will be held by UWSCG and SC. All improvements will be duly reflected in the next SAEMR January-June 2022.

3.5 Unanticipated Environmental Impacts or Risks

56. During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers, however, IPMO, SC and CC have taken all appropriate measures to minimize this risk. These measures, inter alia, included updating the relevant SEMP by the contractor, developing emergency management plan by SC, etc. More details are provided in paragraphs 36-38 above.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

57. During the reporting period Environmental measurements of Noise level and Ambient Air Quality were carried out by contractor only under Pot-02 sub-project.
58. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 14 and 15 below.

Table 14: Noise Level Guidelines

Noise	dBA National Regulations		dBA WHO	
	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

59. Air pollution standards by IFC/WHO 1999, are presented in the Table 15 below. National Air Pollution Standards are provided in the table 16 below.

Table 15: 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/ 1Hour 0,04/1Year
Aldehyde	n/a

59. Environmental quality measurements of noise level and ambient air quality under POT-02 sub-project were conducted by Contractor in September 2021 (Please see Table 16 below). The next monitoring measurements will be conducted in February 2022 and results will be reflected in the next January-June 2022 EMR.
60. According to data received in September 2021 noise and Air pollution level doesn't exceeds the standards of the National Regulations and World Health Organization (IFC/WHO),1999 under POT-02 sub-project and therefore no additional mitigation measures are required. IFC/WHO standards for Noise and Air pollution are presented in Tables 14 and 15 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 14:30 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 Monitoring Measurement of Noise and Air Quality, POT-02

N	Place of measurement	Coordinates	Results				
			Dusts Mg/m ³	CO Mg/m ³	NO ₂ Mg/m ³	SO ₂ Mg/m ³	Noise 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	X 719287 Y 4675750	0.043	0.10	0.180	<0.1	50.4

61. Environmental quality measurements of noise level and ambient air quality under GUD-02 sub-project were conducted by the Ltd. NASETO Group on 14 December 2021 (See Table 17, Table 18 below and Annex A). The next monitoring measurements will be conducted in March 2022 and results will be reflected in the next Semi-annual EMR, January-June 2022.
62. According to data received in December 2021 noise level in some cases exceeds the standards of the National Regulations and World Health Organization (IFC/WHO),1999 under GUD-02 sub-projects and therefore additional mitigation measures which are presented in the table 24 below are required (please see IFC/WHO standards for Noise and Air pollution in Tables 14 and 15 above). It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 14:40 pm to 16:10 pm and no complaints were received from the local population about the noise during the reporting period. The distance from the construction sites to the nearest residential houses is more about 500 m.

Table 17: Environmental Quality Measurements, GUD-02 (Noise, Vibration)

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
Gudauri Pumping Station	38TO458893 4702408	40,2	<0,1	<66	<0,1	<100	0,003	0,004	0,006
Gudauri Reservoir	38TO457008 4703113	43,8	<0,1	<66	<0,1	<100	0,003	0,005	0,008
Gudauri Track	38TO457187 4702170	69,5	<0,1	<66	<0,1	<100	0,013	0,015	0,027

Table 18: Environmental Quality Measurements, GUD-02 (Air Pollution)

Measurement Point		Measurement Results mg/m ³			
Location	Coordinates	Nitrogen dioxide	Sulfur dioxide	Carbon monoxide	Total Hydrocarbon
Gudauri Pumping Station	38TO458893 4702408	0,029	<0,01	0,11	<0,1
Gudauri Reservoir	38TO457008 4703113	0,002	<0,01	0,14	<0,1
Gudauri Track	38TO457187 4702170	0,034	<0,01	0,29	<0,1

63. During the reporting period, environmental quality measurements were not carried out within the framework of JVA-01 and POT-01 subprojects, as construction activities included only a small amount of earthworks and none of the activities under the sub-project had a potential to generate significant noise and air pollution, as there were no sensitive receptors in the proximity of the construction sites (approximately 900m). Also construction activities did not involve high noise/vibration generating activities like pile-driving or rock cutting. Notwithstanding the above, ES UWSCG / USIIP asked SC to issue a non-compliance notice to the contractor to ensure that environmental quality measurements are carried out during the construction works and provide the measurement data to UWSCG.

4.2 Trends

64. All mitigation measures identified in relevant IEE/EMP and SEMP within the framework of the POT-01, POT-02, GUD-03 and JVA-01 projects are effective and Construction Company is required to follow all these requirements.

4.3 Summary of Monitoring Outcomes

65. The noise and air pollution levels during the construction period under the GUD-02

subproject exceed the existing IFC / WHO standards and national regulations, and therefore additional mitigation measures are required, which are presented in Table 24 of this report.

4.4 Material Resources Utilization

4.4.1 Current Period

66. The material resources utilized by contractor - JV “Pfeiffer – EMIT”, under POT-02 sub-project during the reporting period – July-December 2021 is provided in the Table 21 below.

Table 21: Material Resources Utilization under POT-02 Sub-project, July-December 2021

N		Monthly	Measurement
1	Consumption of Drinking Water	450	LT
2	Consumption of Technical Water	3	T

67. There is no information on material resources (Consumption of Drinking Water and Technical Water, Electricity) used during the reporting period under the POT-01 and GUG-02 sub-projects from the contractors despite numerous written and oral instructions and requests issued by Environmental Consultant of UWSCG / USIIP. UWSCG will issued non-compliance notice to contractors under POT-01 and GUD-02 sub-projects on the above matter. Information about material resources utilization during the next reporting period will be presented in relevant SAEMR of January-June 2022.

4.4.2. Cumulative Resource Utilization

N/A

4.5 Waste Management

4.5.1 Current Period

68. At the construction sites of JVA-01, POT-01, POT-02 and GUD-02 sub-projects, 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 services of the local Municipalities,
69. Hazardous waste is removed from the area on the basis of agreements concluded by contractors with certified companies under JVA-01, POT-01, POT-02 and GUD-02 sub-projects after the start of civil works
71. There is need of routine organization and cleaning of sites. Contractors always have separate containers for household and hazardous waste with proper labeling at the construction site.
72. 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.

4.5.2 Cumulative Waste Generation

N/A

4.6 Health and Safety

4.6.1 Community Health and Safety

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

Relevant measures are undertaken for COVID-19 prevention at construction sites, more detailed information is provided in the Paragraphs 32-34 above.

4.6.2 Worker Safety and Health JVA-01

Environmental H&S Manager of JVA-01 sub-project Mr. Nodar Usupishvili was performing day-to-day monitoring of sites, according to EH&S standards and by requirements of UWSCG and SC/SAFEGE and providing relevant reports on a regular basis taking into account any recommendations given by SC/UWSC.

EH&S issues which were covered during the reporting period are as follows:

- PPE;
- Ground works;
- Manual works;

70. No workers incidents have been reported during reporting period under JVA-01 project, which may be resulted in Health and Safety problems.

4.6.3 Worker Safety and Health GUD-02

71. Environmental H&S Manager of GUD-02 sub-project Mr. Aleksandr Mchedlishvili was performing daily monitoring of construction sites, including supervision of ongoing works according to EH&S standards.

72. Health & safety and environment issues which were covered during the reporting period are as follows:

- PPE;
- Reinforcement;
- Ground works;
- Manual works;
- Upgrade Safety Hard and Warning Barricade
- Dust and Noise Measurements

73. Contractor under GUD-02 sub-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 GUD-02 sub-project.

74. The following Near-Misses were reported by SC under GUD-02 sub-project, which may be resulted in Workers' Health and Safety problems:
- Workers always should use complete PPE to avoid accidents
 - In case of working on height, more than 1,5m. workers must use protective anti-dumping equipment
75. No workers incidents have been reported during reporting period under JVA-01 project, which may be resulted in Health and Safety problems.

4.6.4 Worker Safety and Health POT-02

76. Environmental H&S Manager of GUD-02 sub-project Mr. Nikoloz Neparidze was performing daily monitoring of construction sites, including supervision of ongoing works according to EH&S standards.
77. Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Working on height;
 - Ground works;
 - Manual works;
 - Removal waste;
 - Installation and dismantle formwork
 - Induction all visitors
 - Dust and Noise Measurements
78. No workers incidents have been reported during reporting period under JVA-01 project, which may be resulted in Health and Safety problems.

4.6.5 Worker Safety and Health POT-01

79. Environmental H&S Manager of GUD-02 sub-project Mr. Beka Khachidze was performing day-to-day monitoring of construction sites, including supervision of ongoing works according to EH&S standards.
80. Health & safety and environment issues which were covered during the reporting period are as follows:
- PPE;
 - Ground works;
 - Manual works;

- Removal waste;
- Installation of pipes;
- Induction all visitors
- Upgrade Safety Hard and Warning Barricade

81. During the reporting period, within the framework of the POT-01 sub-project, no near-misses forms have been filed. SC and UWSCG / USIIP requested from contractor to adequately fill the near-misses forms and reflect in their monthly monitoring reports.

4.7 Training

82. On September 15, 2021 within the framework of the USIIP, GUD-02 sub-project, ES of Supervision Company Mr. Shalva Bosikashvili, ES of UWSCG/USIIP Ms. Ketii Chomakhidze and social specialist of SC/Safege Ms. Gvantsa Lukava conducted environmental and social safeguard training for representatives of the construction company and the engineer. The training took place at the contractors field office (Please see Annex 2 – Training Photos, Annex G - The list of Participants) were Training issues included ADB's SPS 2009, IEE/EMP and SEMP implementation. The training was attended by representatives of CC / China Nuclear Industry 23, SC and UWSCG.

83. Non-compliances identified during the on 15 September 2021 site visit within the framework of the GUD-02 subproject and the corresponding corrective action plans to be implemented were discussed during the training as well. Interactive communication with representatives of the Central Committee took place.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review

84. All SSEMPs under ZUG-01, POT-01, POT-02, JVA-01 and GUD-02 projects were prepared by Contractor, endorsed by SC and approved by UWSCG and reviewed/commented by the RETA International Environmental Consultant of ADB under RETA 8663-Ms. Ketil Dgebuadze.
85. SEMP 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 23 below.
86. SEMP for construction of Water Reservoir and well fields under GUD-02 is prepared by contractor and submitted to SC for their endorsement.
87. This SEMP for POT-02 sub-project was prepared in May 2018, as it is presented in the table below and further updated in August 2020 due to the design changes identified in VO#2, including construction of an emergency bypass for a new WWTP of Poti.

Table 23: 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	Jvari-01 - Lia Well Fields	July 2018
4	Pot-02 - Poti WWTP	31 May 2018
5	Pot-02 - Poti WWTP	Updated in August 2020
6	GUD-02 – Construction of Reservoir and well fields	September 2019
7	GUD-02 – Construction of water supply and sewerage network	September 2019

88. All of the SSEMPs listed above are effective, mitigation measures are still relevant, no changes are required.
89. All SEMP were updated with risks associated with COVID-19 outbreak including all relevant mitigation measures.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

- 90.** During the reporting period, close monitoring, guidance and communication between the DEPP, IPMO, consultant supervision team and contractors were improved, as suggested during the previous EMR, January-June 2021, to avoid non-compliances and improve the situation on construction sites within the USIIP / T4.

6.2 Opportunities for Improvement

- 91.** During the next reporting period the tracking of actions to address non-conformances will be improved by PIU up to 100% out of current 95%. All non-conformances addressed will be reflected in the next SAEMR, January-June 2022.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

92. During the reporting period Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis.
93. 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.
94. The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector.
95. An Emergency Management Plan (March 2020) was developed by SC/SAFEGE for prevention of employees against COVID-19.
96. Environmental Monitoring Specialist of Safege, Mr. Shalva Bosikashvili conducted monitoring of project sites under T4 and developed Non-Conformance Notices were required. He also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submitted to UWSCG.
97. 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.
98. 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.
99. Non-Conformance Notice has been issued to the contractor by the environmental specialist of UWSCG/USIIP. Mitigation measures in order to reduce major environmental impacts have been instructed to CCs during the monitoring visits as well. The Contractor is required to undertake parametric measurements Semiannually and observations on air quality, noise and socio-cultural resources.
100. 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

101. During the reporting period, July-December 2021, the USIIP/T4 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.

102. More detailed recommendations for the implementation of T4 during the next reporting period January-June 2022 are provided in the table 24 below:

Table 24: 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-02 sub-projects	
Recommendations POT-01	Implementation status and date
Poti Network	
Proper waste management. Waste containers without lid and label.	Instructions are given to contractor to improve the situation and to conduct following mitigation measures by the 31 January 2022
POT-02	
Oil spill response kits should be placed at the appropriate locations.	Instructions are given to contractor to improve the situation and to conduct following mitigation measures by the 31 January 2022
GUD-02	
Unacceptable housekeeping; tripping & slipping hazard	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 31 January 2022
Noise from the construction activities should not cause disruption and nuisance to nearby community and other sensitive receptors (i.e. school, hospitals).	Instructions are given to contractor to improve the situation and to conduct following mitigation measures by the end of July 2021: Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned

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

	<p>during periods of the day that will result in least disturbance</p> <p>Noisy construction activities will be avoided during night time</p> <p>All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions</p> <p>Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e. temples, hospitals, schools, houses)</p> <p>Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise</p> <p>Conduct meetings with population and provide information related to schedule of construction activities and noise caused by the project activities.</p>
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1. Conduct Post-Construction Environmental Audit by the March 2022 for ZUG-01 project and reflect findings of the audit in the next Semi-Annual EMR of January-June 2022.
2. Conduct monitoring of Environmental quality measurements of Ambient Noise and Air quality under POT-01, POT-02 and GUD-02 sub-projects project at the nearest sensitive receptors in February - March 2022.

Table 25: The Specific Plan for Environmental Measurement under POT-01sub-project

Parameters	Quarterly measurement
Dust	February 2022

Parameters	Quarterly measurement
Vibration	February 2022
Carbon monoxide	February 2022
Nitrogen dioxide	February 2022
Sulfur dioxide	February 2022
Noise	February 2022

3. Conduct monitoring of Noise and Ambient Air quality under POT-02 project near the sensitive receptors of Construction sites in February 2022.

Table 26: The Specific Plan for Environmental Measurement under POT-02 Project

Parameters	Quarterly measurement
Dust	February 2022
Vibration	February 2022
Carbon monoxide	February 2022
Nitrogen dioxide	February 2022
Sulfur dioxide	February 2022
Noise	February 2022

4. Conduct monitoring of Ambient Noise and Air quality under GUD-02 project at the nearest sensitive receptors (residential houses) in March 2022.

Table 27: The Specific Plan for Environmental Measurement under GUD-02 Project

Parameters	Quarterly measurement
Dust	March 2022
Vibration	March 2022
Carbon monoxide	March 2022
Nitrogen dioxide	March 2022
Sulfur dioxide	March 2022
Noise	March 2022

Annexes

ANNEX A: Environmental Monitoring Data of Noise and Ambient Air Quality GUD-02, December 2021



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-21215 2021-12-20	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

**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.

“ჩაინა ნუკლეარ ინდასტრი 23 კონსტრაქშენ კო“-ს ფილიალი საქართველოში
 "Georgia Branch of China Nuclear 23 Consturction Company Co.,Ltd"
 ჰაერის მტვერით დაბინძურების, ხმაურის და ვიბრაციის გაზომვების შედეგები
 14.12.2021. 14⁰⁰ – 16⁰⁰

Dust air pollution, noise and vibration measurements on 14.12.2021. 14⁰⁰ – 16⁰⁰

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები Measurement results							
	ადგილი მდებარეობა Locastion	კოორდი- ნატები Coordinates	ხმაური A _{max} დბ Noise A _{max} db	ვიბრო ხიჩქარე Vibro Speed		ვიბრო აჩქარება Vibro acceleration		მტვერი მგ/მ ³ Dust mg / m ³		
				მმ/წმ mm/s	დბ db	მ/წმ ² m/s ²	დბ db	Pm _{2.5}	Pm ₁₀	Total
1	გუდაური, სატუმბო სადგური. Gudauri, Pumping station	38T0458893 4702408	40,2	<0.1	<66	<0.1	<100	0.003	0.004	0.006
2	გუდაური, რეზერუარი. Gudauri, Reservoir	38T0457008 4703113	43,8	<0.1	<66	<0.1	<100	0.003	0.005	0.008
3	გუდაური, ტრასა. Gudauri, Track	38T0457187 4702170	69,5	<0.1	<66	<0.1	<100	0.013	0.015	0.027

ჰაერის აზოტის და გოგირდის დიოქსიდით, ნახშირბადის მონოოქსიდით და
 ჯამური ნახშირწყალბადებით დაზინძურების გაზომვების შედეგები
 14.12.2021. 14⁰⁰ – 16⁰⁰

**Nitrogen and sulfur dioxide, carbon monoxide and total hydrocarbon air pollution
 measurement results on 14.12.2021. 14⁰⁰ – 16⁰⁰**

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები მგ/მ ³ Measurement results mg/m ³			
	ადგილ მდებარეობა Location	კოორდი- ნატები Coordinates	აზოტის დიოქსიდი nitrogen dioxide	გოგირდის დიოქსიდი sulfur dioxide	ნახშირბადის მონოოქსიდი carbon monoxide	ჯამური ნახშირწყალბ ადები total hydrocarbon
1	გუდაური, სატუმბო სადგური. Gudauri, Pumping station	38T0458893 4702408	0.029	<0.01	0.11	<0.1
2	გუდაური, რეზერუარი. Gudauri, Reservoir	38T0457008 4703113	0.022	<0.01	0.14	<0.1
3	გუდაური, ტრასა. Gudauri, Track	38T0457187 4702170	0.034	<0.01	0.29	<0.1

გაზომვის დროს გამოყენებულია ხელსაწყოები:/During measurement tools used:

ხმაური/Noise - Mini Sound Level Meter N05CC;

ვიბრაცია/Vibration- Smart Sensor ® AR63B Vibration Meter;

დამტვერიაზობა/ Dust- Portable Dust Detector model LB-HD08

და Gasella Mikro Dust Pro (თვითკალიბრაცია ნულლოვანი და ოფტიკური ფილტრით./Self-calibration zero and optical filter.). აზოტის დიოქსიდის და ნახშირბადის მონოოქსიდის - nitrogen dioxide and carbon monoxide - ჟაჟ CO/NO₂;

ჯამური ნახშირწყალბადების - total hydrocarbon MiniRae 7600;

გოგირდის დიოქსიდის - sulfur dioxide - WASP-XM-E-SO₂.

2001 წლის 16 აგვისტოს, საქართველოს შრომის, ჯანმრთელობისა და სოციალური დაცვის მინისტრის ბრძანება №297/ნ, გარემოს ხარისხობრივი მდგომარეობის ნორმების დამტკიცების შესახებ: / August 16, 2001, the Ministry of Labor, Health and Social Affairs of Georgia №297 / N, approval environmental quality of the norms:

დამტვერიაზობის 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;

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

ნახშირბადის მონოოქსიდის 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;

ვიბროსიჩქარის ნორმა შეადგენს 112 დბ; / Vibro-speed norm is 112 db;

ვიბროჩქარების ნორმა სპეციალური დამცავი საშუალებების გამოყენების გარეშე - 126 დბ./Vibro acceleration norm special protective outlets without using - 126 db.

დირექტორი:
Director

ნ. გაბუნია
N. Gabunia

ტექნიკური შემსრულებელი
Technical Contractor

ს. ხატავა
S. Khatsava



Gudauri, Reservoir



Environmental Monitoring Data of Noise and Ambient Air Quality POT-02, 7 April 2021



National Environmental Agency of Georgia

The Department of Environmental Pollution Monitoring

Division of Technogenic Impact Assessment and Expedition Services

Environmental Survey Report NA4-2021

- ❖ **Objective:** Negotiation # FM- 3/355 07 April 20201:
- ❖ **Client:** LUDWIG PFEIFFER;
- ❖ **Address of the Client :** Tbilisi, Kekelidze str. #18
- ❖ **Tel, Mail:** 599 34 68 21;
- ❖ **Description :** To measure and determine the dust, carbon dioxide and nitrogen dioxide content in Ambient Air and also to measure the level of noise in Poti, at 1 (one) point, indicated by the customer;
- ❖ **Used tools :** Elan Ecointech, Cassella Cel 63x, Cassella Cel 712 Microdust Pro;
- ❖ **Date of the Measurement:** 15.04.2021, 11:05-11:30⁰⁰

Results of the Measurement

N	Measurement site	Nitrogen dioxide	Carbon dioxide	Dust	Noise
		NO ₂ mg/m ³	CO ₂ mg/m ³	mg/m ³	level dB _A
1	Sewage construction area X 719287 Y 4675750	0,182	0,16	0,045	51,4
Environmental norms		0,2	5,0	0,5	

Photos:



Acting Head of Division
Leading specialist

Gela Sandodze
Gigla Morgoshia

Agreed: Head of Department

M.Arabidze

Environmental Monitoring Data of Noise and Ambient Air Quality POT-01, 1 April 2021

					
<p>Project:</p> <p>Improvement of Poti Wastewater System Sub-project Air, Noise & Vibration monitoring under project April, 2021</p> <p>Prepared for:</p> <p>Tahal Group</p> <p>Prepared by:</p> <p>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	01.04.2021	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		April 1 st , 2021	Improvement of Poti Wastewater System Sub-project (Air, Noise & Vibration monitoring)		
Project Code			Revision		
GERG001			A01		

1. Introduction

It is proposed to improve the wastewater system in Poti under the Asian Development Bank (ADB) funded Urban Services Improvement Investment Program, which is under preparation stage. This Investment Program, implemented in seven towns, will develop the water and sanitation services, which will improve quality of life and optimize the social and economic development. Ministry of Regional Development and Infrastructure (MoRDI) is the Executing Agency (EA) and United Water Supply Company of Georgia (UWSCG) is the Implementing Agency (IA) of this Program.

This sub-project is located in 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 360 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 Kapartchina and Paliastomi Lake. Regional location of Poti is shown in below.

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.

Project implementation body is UWSCG. Project will be implemented as according to the national as well as ADB's environmental legislative framework (SPS 2009) requirements.

2. Regulatory Requirements

The basic legal document is "The Constitution of Georgia", which was adopted in 1995. While the Constitution of Georgia does not directly address environmental matters, it does lay down the legal framework that guarantees environmental protection and public access to information with regard to environmental conditions.

The **Law of Georgia on Environmental Impact Permit (2007)** defines the full list of activities on the territory of Georgia subject to mandatory ecological expertise.

The **Law of Georgia on Environment Protection (1997)** regulates the legal relations between the state establishments and physical or legal entities in the field related to the use of territorial waters, air space, including continental shelf and special economic zones, environmental protection and natural resources on the territory of Georgia.

The **Law OF Georgia on Environmental Assessment Code (2018)** This Code regulates matters related to strategic documents and public or private activities which may have significant effects on the environment, human life and/or health.

The **Law of Georgia on Waste Management Code (2014)** The purpose of this Code is to establish a legal framework in the field of waste management to implement measures that will facilitate waste prevention and its increased re-use as well as environmentally safe treatment of waste (which includes recycling and separation of secondary raw materials, energy recovery from waste and safe disposal of waste).

The **Law of Georgia on Licenses and Permits (2005)** defines the list of activities needing licenses or permits, including so called "Environmental permit". It also defines the requirements for the license or permit issue.

The **Law of Georgia on State Ecological Expertise (2007)**. Under the given Law, the ecological expertise is a necessary measure for making decision on the issuance of environmental and/or construction permit(s).

The state ensures protection of the environment and, correspondingly, protection of water as its main component in **The Law of Georgia on Water (1997)**.

The **Law of Georgia on Cultural Heritage (2007)**. Article 14 of the Law specifies the requirements for 'large-scale' construction works.

The **Law of Georgia on Public Health (2007)**. Promotion of the introduction of a good health and healthy lifestyle of the population; Creation of the environment, which is safe for a human health; Promotion of the protection of the reproductive health of a family; Prevention of infectious and non-infectious diseases.

The **Law of Georgia "On the Red List and Red Book" (2003)** regulates the legal relations in the field of developing the Red List and Red Book, protecting and using the endangered species.

The **Law on Ambient Air Protection (2000)**. It stipulates Maximum Allowable Concentration (MAC) of various pollutants in Ambient Air.

The **Law on System of Protected Areas (1996)**. Depending on the activity and type of protected area, permission for any work will be granted or denied

Technical Regulation of Drinking Water (2007) (Decree N 349/N). The Ministry of Labour, Health and Social Affairs of Georgia. Water supply and monitoring shall comply with the technical regulation.

Rules of the Protection of the Surface Waters of Georgia from Pollution (1996) (№130 order of the Minister of the Protection of the Environment and Natural Resources of Georgia). Source water quality shall comply with the provisions for domestic use.

Technical Regulation of Environmental Protection (2008). (Decree N745), Minister of the Protection of the Environment and Natural Resources of Georgia. Treated effluent disposal from sewage treatment plants shall comply with the specified standards.

"Approval of Environmental Quality Standards", approved by Minister of Health, Labour and Social Affairs [Decree number - 297n of August 16, 2001]. Social Affairs (297n of August 16, 2001) upon the 'Approval of Environmental Quality Standards'; specifying the tolerable and maximum admissible levels of noise for different zones.

3. Description of the works to be accomplished

This is the Poti wastewater sub-project. It involves the rehabilitation and extension of the wastewater network and the construction of a wastewater treatment plant.

It is orientated towards the location of the existing wastewater treatment plant at the northern edge of Poti. The total length of gravity sewer is 22 km, the total length of pressure pipes is 10 km.

There are nine existing wastewater pumping stations. Most of these pumping stations are in a very bad condition. The mechanical and electrical equipment has long passed its design life time and also the civil works need complete replacement. The pumping stations are over-sized.

The wastewater project measures comprise the rehabilitation and extension of the sewer network with gravity sewers and pressure lines, the construction of wastewater pumping stations as well as the construction of a new wastewater treatment plant.

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.

The present sub-project is designed to improve the service standards of the wastewater system in Poti. It is designed to collect and treat the wastewater expected in the year 2040.

4. Measurement results

This report describes air, noise and vibration measurements performed on April 1st, by Gergili LLC subcontractor, Ltd. BBE in Poti, under the contract with TAHAL GROUP B.V.

Test were performed on 1st of April, 2021 in Poti:

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

Kakulia Street , Poti: 41.68358939785864 - 42.13442593718969

Gamsakhurdia Street, Poti: 41.675626414321734 - 42.13519663871343

Makalatia Street, Poti: 41.68248284948836 - 42.133363990856076

4.1 Noise Monitoring

KakuliaStr: Near the machinery, where the noise is the most intense, 76 dBA was recorded. After moving away from the working machinery, the noise intensity increased to 80 dBA and after moving further, it decreased to 67 dBA. It should be noticed, that apart from this machinery, almost nothing caused the noise because the transport was not noticed while being there. Inside the houses, the noise was not so intense as outside and it was 30 dBA.

Gamsakhurdia Street: At the location where the machinery worked, the noise was 75 dBA. In 10-20 meters, it reduced to 66-61 dBA. At Amiranashvili Street, only 1 water pump was working.

Makalatia Street: Near the machinery, (only one Water pump was on), the noise was 83 dBA. When moving a little far from the location, the noise was decreasing to 63 dBA and then to 54 dBA.

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: $\text{Noise level1} - \text{Noise level 2} = 20 \log r2/r1$

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	78	80
11pm – 7am	32	30

Table 4.2 Georgian Noise Quality Standards in Residential Areas

Location #1: Kakulia Street, Poti: [42.13001](#), [41.68557](#)

Distance from noise source, m	Calculation level of the noise Average value - dBA	Calculation level of the noise Maximum value - dBA
10	76	80
20	67	80

Location #2: Gamsakhurdia Street, Poti: [42.13330](#) [41.68244](#)

Distance from noise source, m	Calculation level of the noise Average value - dBA	Calculation level of the noise Maximum value - dBA
10	66	75
20	61	70

Location #3: Makalatia Street, Poti: [42.13056](#) [41.68761](#)

Distance from noise source, m	Calculation level of the noise Average value - dBA	Calculation level of the noise Maximum value - dBA
10	63	70
20	54	60

4.3 Vibration Monitoring

Vibration of the equipment was measured at different points. The vibration acceleration of the water pump on its own, vibration acceleration 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 was 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.

Location #1: Kakulia Street, Poti: [42.13001](#) [41.68557](#)

Vibration acceleration of the pump	0.066
10 m from the pump and equipment	0.00
20 m from the pump and equipment	0.00

Location #2: Gamsakhurdia Street, Poti: [42.13330](#) [41.68244](#)

Vibration acceleration of the pump	0.02
10 m from the pump and equipment	0.00
20 m from the pump and equipment	0.00

Location #3: Makalatia Street, Poti: [42.13056](#) [41.68761](#)

Vibration acceleration of the pump	0.22
10 m from the pump and equipment	0.00
20 m from the pump and equipment	0.00

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)
Kakulia Street	0.6	0.00	0.001	0.001, 0.007
Gamsakhurdia Street	0.00	0.00	0.00	0.001, 0.001
Makalatia Street	0.00	0.00	0.001	0.063, 0.071
At the location	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Kakulia Street	4.4	0	0.035	0.024, 0.029
Gamsakhurdia Street	0	0	0.037	0.013, 0.029
Makalatia Street	6.6	0	0.071	0.013, 0.017
(10 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Kakulia Street	1.6	0.00	0.033	0.029, 0.026
Gamsakhurdia Street	0.00	0.00	0.043	0.012, 0.014
Makalatia Street	3.8	0.00	0.053	0.084, 0.087
(20 meters)	CO (Equip. ON)	SO ₂ (Equip. ON)	NO ₂ (Equip. ON)	PM 2.5, PM 10 (Equip. ON)
Kakulia Street	6.1	0.00	0.049	0.012, 0.013
Gamsakhurdia Street	0.00	0.00	0.033	0.001, 0.001
Makalatia Street	1.00	0.00	0.046	0.081, 0.083

Table 4.4 Air Quality Measurement Results

If we compare previous report 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. The main reason which might be a main contributor to difference in measurement results, is weather conditions. On April 1st, 2021 there was a sunny day in Poti. This is why the air quality is slightly worse than that of previous report. During the previous measurements on 12th of November, the air temperature was ranging between 10-13 °C on 12th November, and April 1st air temperature was 17 °C.

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

Revaz Enukidze

Director

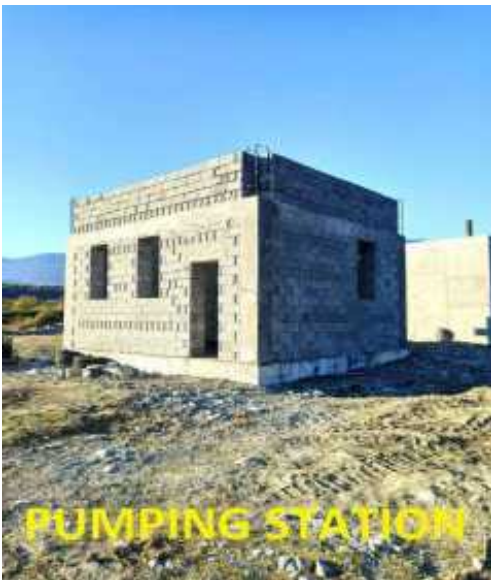


ANNEX B: PHOTOS OF JVA-01, POT-01, POT-02 and GUD-02 SUB-PROJECTS

PHOTOS: JVA-01

Construction of Water Supply Network in Jvari, JVA-01 Sub-project

Photo N1, N 2 Pumping Station



Construction of Well Field in Jvari, JVA-01, Photo N3



PHOTOS: POT-01

Constriction of Sewerage System in Poti, POT-01, Photo N1, photo N2



Construction of WWTP in Poti, POT-02, Photo N1, Photo N2



Construction of water supply and sewerage network in Gudauri, GUD-01, Photo n1

Gudauri Well fields



PHOTOS OF ENVIRONMENTAL SAFEGUARD TRAININGS UNDER GUD-02 SUB-PROJECT, 15 SEPTEMBER 2021



ANNEX C: NON-COMPLIANCE NOTICE (GUD-02), 15 SEPTEMBER 2021

15th September 2021

TO: China Naclor Industry 23
Construction CO., LTD

Our Ref: GUD 02- 323/OUT - YH

Contract: P43405-ICB-GUD 02


**Subject – Supervision of Gudaari 02 Works Contract – Non-Compliance Note -
September 2021**

Dear Sir,

Please find attached the Non-Compliance Notice regarding construction of Sewage Collection and Water Supply Systems in Gudaari.

You are notified to take immediate measures for remedial of the situation and assure normal working conditions on site.

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 - Gullec Ele 92, 1200 Brussels, BELGIUM - Tel: +32 2 739 46 90 - Fax: +32274238 91
VATN° (BE)0467395488 RPPH Brussels - Bank: KBC - IBAN: BE49473105188171 - BIC: KREGBE33
SAFEGE Headquarters - 15/27 rue du Port, Parc de l'Île, 92300 Nanterre, FRANCE
Tel: +33146147100 - Fax: +33 147247202 - Web: www.safegeb.com



Non-Compliance Notice

Project: Construction Supervision (under USIP, Tranche 4 Projects), UWSCG/USIP/QCBS/02-2014	Non-compliance Notice Gudauri
Contract No: UWSCG-ICB-GUD-02-2018	
Contractor: China Nuclear Industry 23 Construction Co., Ltd	
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. H&S standards and rules should be addressed and implemented.

NON-COMPLIANCE IN Gudauri

Construction of Sewage Collection and Water Supply Systems in Gudauri

- Topsoil Unacceptable housekeeping; tripping & slipping hazard
- Damaged road signs.





All these conditions have to be remedied within 10 days by the prime Contractor **China Nuclear Industry 23 Construction**

Date of site visit: **15.09.2021**

Shahya Bosikashvili - Environmental specialist - "SAFEGE"

Ketavan Chemakhidze - Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE (GUD-02), 17 NOVEMBER 2021

Non-Compliance Notice

Project: Construction Supervision (under LISIP, Tranche 4 Projects), LWSCG/LISIP/QCBS/02-2014	Non compliance Notice Gulfairt
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 flagman should control traffic movement properly. H&S standards and rules should be addressed and implemented.</p> <p>NON-COMPLIANCE IN Gulfairt</p> <p>Construction of Sewage Collection and Water Supply Systems in Qaladiah</p> <ul style="list-style-type: none">- Waste container without lid and label- Unacceptable housekeeping- Uncontrolled oily waste; oil spills <p>Generators without drip tray and without fire extinguisher</p>	
	
Unacceptable housekeeping	



Uncontrolled oily waste; oil spills



All these conditions have to be remedied within 10 days by the prime Contractor **China Nuclear Industry 23 Construction Co., Ltd**

Date of site visit: 17.11.2021

Shalva Bosikashvili - Environmental specialist - "SAFEGE"

Ketevan Chomakhidze - Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE, POT-01, 16 SEPTEMBER 2021

Non-Compliance Notice

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. PPE wearing is obligatory at the construction site.

NON-COMPLIANCE IN POTI 01

WWTP Poti 01

- Open pits without hard barrier and warning signs
- Exposed wires
- Contamination with solid waste
- Open trench without hard barrier and warning signs

Open pits without hard barrier and warning signs





Exposed Wires



Contamination with solid waste



Open trench without hard barrier and warning signs



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

Date of site visit: 16.09.2021

Shalva Boukashvili - Environmental specialist - "SAFEGE"

NON-COMPLIANCE NOTICE (POT-01), 29 SEPTEMBER 2021



4th October 2021

To: **TAHAL GROUP BV**

Mr. Igor Oranik
Contractor's Representative

Our Ref.: POT101 - 400/OUT-VH

Contract: F42405-ICB-POT-01

Subject SUPERVISION of POT1 SEWAGE WORKS CONTRACT - Non-Compliance Notice - September 2021

Dear Sir,

Please find attached the Non-Compliance Notice.

You are notified to take immediate measures for remedial of the situation and assure normal working conditions on site. We kindly remind you, that the Contractor should prepare response letter with relevant photos proving that the problem is solved as soon as possible.

For the Engineer

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

Victor Hruska
Team Leader

Urban Services Improvement Investment Program (Project 4)



SAFEGE-with Engineering Solutions LLC as sub-consultant - ADD ADDRESS
SAFEGE Europe & Africa - Oulédole 52, 1200 Brussels, BELGIUM - Tel: +32 2 739 46 90 - Fax: +32 2 742 38 81
VAT N° (BE) 0467 205 486 RPM Brussels - Bank: KBC - IBAN: BE 48 4733 0518 8171 - BIC: KRODEF33
SAFEGE Headquarters - 15/27 rue du Port, Parc de l'Île, 92000 Nanterre, FRANCE
Tel: +33 1 46 24 71 00 - Fax: +33 1 47 24 72 02 - Web: www.safege.com



Non-Compliance Notice

Project: Construction Supervision (under USIP, Tranche 4 Projects), UWSCG/USIP/QCBS/02-2014	Non-compliance Notice Pot 01
Contract No: P43405 ICB POT 01	
Contractor: TAI AL 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. Refueling 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. PPE wearing is obligatory at the construction site.	
NON-COMPLIANCE IN POT 01	
WWTP Pot 01	
<ul style="list-style-type: none">• Housekeeping issues• Unsafe wiring• Oil Spills• Worker without PPE caring out excavator refueling from jerrican	
Housekeeping issues	
	
Unsafe wiring	



Oil Spills



Worker without PPE performs excavator refueling from jerrican



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

Date of site visit: 29.05.2021

Shalva Bosikashvili Environmental specialist "SAFEGE"

Ketevan Chamakhidze Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE (POT-01), 18 OCTOBER 2021

Non-Compliance Notice

Project: Construction Supervision (under USIP, Tranche 4 Projects), UWSCG/USIP/QCBS/02-2014	Non-compliance Notice Poti 01
Contract No: P43405-JCB-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. PPE wearing is obligatory at the construction site.	
NON-COMPLIANCE IN POT1 01	
WWTP Pot1 01	
<ul style="list-style-type: none">• Open house connections without hard barrier and warning signs• Remaining inert waste open manhole	
Open house connections without hard barrier and warning signs	
	
	

Remaining inert waste and open manhole



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

Date of site visit: 18.10.2021

Shalva Bosikashvili - Environmental specialist - "SAFECE"

Ketevan Chomakhidze - Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE, POT-02, 19 OCTOBER 2021

Non-Compliance Notice

Project: Construction Supervision (under USIP, Tranche 4 Projects), UWSCG/USIP/QCBS/02-2014	Non-compliance Notice Pool 02
Contract No: P43405-IC-POTI-02	
Contractor: JV "Pfeiffer – EMIT"	
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.</p> <p>NON-COMPLIANCE IN POTI 02</p> <p>WWTP Pool 02</p> <ul style="list-style-type: none"> - Unacceptable housekeeping and lack of warning signs - Area around the cherry picker without warning tape <p><i>Unacceptable Housekeeping and lack of warning signs</i></p>	
	

Area around the cherry picker without warning tape



All these conditions have to be remedied within 10 days by the prime Contractor **JV "Pfeiffer – EMIT"**

Date of site visit: 19.10.2021

Shalva Boskashvili - Environmental specialist - "SAFEGE"

Ketevan Chomakhidze - Environmental specialist "UWSCG"

NON-COMPLIANCE NOTICE, POT-02, 12 NOVEMBER 2021

Non-Compliance Notice

Project: Construction Supervision (under USIIP, Tranche 4 Projects), UW5CG/USIIP/QCBS/02-2014 Contract No: P43405-IC-POT1-02 Contractor: JV "Pfeiffer – EMIT" Reference:	Non-compliance Notice Poti 02
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 .	
<u>GENERAL COMMENT FOR ALL SITES:</u> 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.	
<u>NON-COMPLIANCE IN POT1 02</u> WWTP Pot1 02	
<ul style="list-style-type: none"> - Unacceptable housekeeping - Trench without warning tape 	
<u>Unacceptable Housekeeping</u>	
	

	
Trench without warning tape	
	
All these conditions have to be remedied within 10 days by the prime Contractor JV "Pfeiffer – EMIT"	
Date of site visit: 12.11.2021	
Shalva Boskashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-02, 7 DECEMBER 2021

Non-Compliance Notice

Project: Construction Supervision (under USIP, Tranche 4 Projects), UWSCG/USIP/QCBS/02-2014	Non-compliance Notice Pot 02
Contract No: P43405-IC-POTI-02	
Contractor: JV "Pfeiffer – EMIT"	
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.</p> <p>NON-COMPLIANCE IN POTI 02</p> <p>WWTP Pot 02</p> <ul style="list-style-type: none"> - Unacceptable housekeeping - Unsafe work on height <p>Unacceptable Housekeeping</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Unsafe work on Height</p>	

<div style="display: flex; justify-content: space-around;">   </div>	
<p>All these conditions have to be remedied within 10 days by the prime Contractor JV "Pfeiffer – EMIT"</p>	
<p>Date of site visit: 07.12.2021</p>	
<p>Shalva Boskashvili - Environmental specialist - "SAFEGE"</p>	
<p>Kereva Chamakhidze - Environmental specialist "UWSCG"</p>	
<p> </p>	

ANNEX D: CORRECTIVE ACTION PLAN (POT-01), 8 October 2021



VOL1/P43405-ICB-POT-01/THL/PM/RE/2021/1156
Date: 08 October 2021

TO: ASSISTANT RESIDENT ENGINEER
SAFEQ ENGINEERING SOLUTIONS
ATTN: Mr LEVAN KHORAVA

CONTRACT: P43405-ICB-POT-01
POTI SEWERAGE SYSTEM CONSTRUCTION
SUBJECT: REPLY ON ENGINEER'S LETTER POTI 01 - 874 OUT - L.KH
Your Ref: POTI 01 - 874/OUT -L.KH

Dear Sir,

In the letter POTI 01- 874/OUT - L.KH dated on 30th September 2021, sent by Engineer we see the open areas, open HC places, open trenches and plastic manhole areas. Everyday our three safety officers checking all sites and trying to keep on minimum safety norms according to the situation we have. I would like to mention that despite the fact that we are not ready to correspond the high level of the safety standards, we had only one single small accident, injured leg of the daily worker on the site.

So what about particular letter 874 and photos. The street on the photos is Saakadze street, the residents of this street during the last 6 days didn't give the opportunity to work for the team (Subcontractor Turkish Team- Baskent 1/2). Neither police no municipality department couldn't help and solve the problem. Moreover because of much threats from the some residents this team left the site and move to the other working area. Residents every day on the different streets behave very aggressively, turn safety warning tapes, overturn barriers and HC covers and pipes.

The subcontractor installed the rest 4 HC, closed HC bases by bags and closed the trenches so the Saakadze street is finished and cleaned and we will finish all HC with shaft pipes and covers to install in October 2021.





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

Igor Oraniuk
Contractor's Representative

CORRECTIVE ACTION PLAN (POT-01), 1 November 2021



VOU/P43403-ICB-POT-01/THL/PM/RE/2021/1165
Date: 01 November 2021

TO: ASSISTANT RESIDENT ENGINEER
SAFEGE ENGINEERING SOLUTIONS
ATTN: Mr. LEVAN KHORAVA

CONTRACT P43403-ICB-POT-01
POT1 SEWERAGE SYSTEM CONSTRUCTION
SUBJECT: VIOLATION ON SITE AREA AND WAREHOUSE
Tota Ref POT1 01- 884/OUT - LKH

Dear Sir,

With the reference to your letter: POT1 01 - 884/OUT - LKH dated on 26 October 2021 we want to comment, that warehouse area was cleaned from plastic bottles and garbage, also, all stored material was covered and placed on wooden platform.

Polluted ground, as always, was not put placed in dangerous waste area.

At every construction site trenches are fenced with fences and warning signs (Photos attached).





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

Igor Oranisk
Contractor's Representative

CORRECTIVE ACTION PLAN (POT-01), 15 December 2021



VOL1/P43405-ICB-POT-01 /THL/PM/RE/2021/1172
Date: 15 December 2021

TO: ASSISTANT RESIDENT ENGINEER
SAFEGE ENGINEERING SOLUTIONS
ATTN: Mr. LEVAN KHORAVA

CONTRACT: P43405-ICB-POT-01
POTI SEWERAGE SYSTEM CONSTRUCTION
SUBJECT: REPLY ON ENGINEER'S LETTERS POTI 01 - 892/OUT - L.KH / 891/OUT -
L.KH

Your Ref: **POTI 01 - 892/OUT -L.KH**
POTI 01 - 891/OUT -L.KH

Dear Sir,

With the reference to your letters POTI 01- 892/OUT - L.KH dated on 01 December 2021 and POTI 01- 891/OUT - L.KH dated on 21 November 2021 we want to comment that at every construction site trenches are fenced with barriers and warning signs.

(Photos attached)









Yours faithfully,

For and on behalf of TAHAL GROUP B.V.

A handwritten signature in black ink, appearing to read 'Igor Oraniuk'.

Igor Oraniuk

Contractor's Representative

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



Annex №2

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

Note: In compliance with Order No.17/20 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 Suspension, Disability and Issuance of Doctor's 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 doctor's written note (Medical Certificate) to persons quarantined in order to prevent the spread of coronavirus. This document will serve as the basis to receive monthly payment and therefore, the working days spent in quarantine or in self-isolation will be legitimate and fully paid to the employees. In order to get the certificate, an unemployed person has to apply to the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia at

For further information, please contact:

☎ 15 05 00

☎ 190 603

StopCoV.ge

The job of builder involves constantly changing work places and work activity resulting in open air conditions. For this reason, in cases of virus spread construction jobs within the medium and wider horizons are especially concerned. Nevertheless, it is important to consider the following preventive measures at construction work.



The staff must not appear to the workplace if they:

- Left the affected country over the past 14 days.
- Were in close contact with infected persons for the past 14 days (they must be well informed/questioned as per the rules).
- 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 disease (cardio-vascular disease, diabetes, bronchial asthma and other respiratory disease).

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 caused 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 IEPH, i. Subordinate 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).
- Insure the working space per announcements about COVID-19 and about the preventive measures that have been identified by IEPH, i. Subordinate National Center for Disease Control and Public Health.
- In relation to the employees who can perform job remotely (administrative personnel) create as much as possible use of such working mode.
- At the entrance of work manufacturing room, place disinfecting rug 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 cleaning 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 responsibility of personal protective equipment and disinfectants.

- Depending on their work specificity, provide the employees with necessary personal protective equipment (protective clothing, protective shoes, helmets, 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 F: EMERGENCY MANAGEMENT PLAN



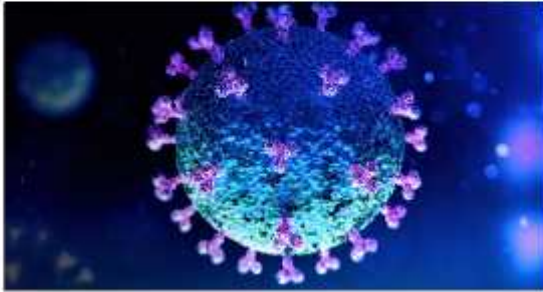
SAFEGE



Georgia: CONSTRUCTION SUPERVISION CONSULTANCY SERVICES
FOR URBAN SERVICES IMPROVEMENT INVESTMENT PROJECT (USIIP)

Financed by the Asian Development Bank and Government of Georgia

COVID-19 Emergency Management Plan in Construction Sector



Prepared by: **SAFEGE** - Supervision Consultant
Tbilisi, Georgia

For: Ministry of Regional Development & Infrastructure (MRDI)
United Water Supply Company of Georgia (UWSCG)

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1. PREAMBLE

1.1 Project Description

- The Urban Services Investment Treatment Program was developed as the Government's response to the need to improve 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-Transfer 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. UWSOG is a 100% state-owned company.
- The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, and proceeding 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 wastewater treatment plants.
- Activities of the investment program includes:
 - Construction of Water Supply System in Zugdidi (Sub-01 - Contract No: P1425-ICB-24p-01)
 - Construction of Sewerage System in Poti (Pot-01 - Contract No: P4385-ICB-Pot-01)
 - Construction of Wastewater Treatment Plant in Poti (Pot-02 - Contract No: P43425-ICB-Pot-02)
 - Construction of Water Supply System in Jvari (Jvari-01 - Contract No: P4445-IC- Jvari-01)
 - Construction of Sewage Collector and Water Supply System in Gushaki (UWSOG-ICB-GUD-02-2020-GLD-02)
- Construction of Water supply system in Zugdidi (Sub-01). The project comprises of the construction of 1 water supply pumping station – 1,170 m³; construction of new reservoir (3,300 m³); distribution network – laying of approximately 220 km water supply pipelines; approximately 35 km transmission main; wells – drilling of 10 drinking water wells.
- The contract SUB-01 was signed on October 26, 2015 with AS Inshov, M. LLC (Georgia), the construction works were completed in September 2018 and further extended until June 2020 due to the additional construction works under VDB4 and VDB6: Construction of Additional Sewage Network Connections and Sewerage Pumping Stations of Anaklia.
- VDB4 and VDB6 under the SUB-01 sub-project include:

Connection of residential houses

- Construction of residential houses in Garmakhtan resort to main sewer line: L=1140.7m, n=203 houses;
- Construction of residential houses in Anaklia resort to main sewer line: L=5728 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 Garmakhtan;
- Installation of # 33 Pump Stations (PS). Arrangement of pressured pipeline (d= 305 mm, L= 1813m) and connection to existing L= 2400m concrete pipe. Arrangement ramp connection on the main channel with a steel casing pipe (d=630mm / 3mm, L= 21m) and 13 overpasses above the d: 1m small drainage pipe with a steel casing pipe (d: 630mm / 3mm, L= 8m) in Anaklia.

Rehabilitation of Water Supply and Sewerage Distribution Network

- Installation of a new sewer pressure pipe (d= 150 mm, L= 204m) 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= 340m of the new pipeline.

- 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 TWHAL Group BV on 20 December 2017. The final date of completion of the contract is July 31, 2020.
- 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 TU "Pfeffer - EMIT" completed by "Ludwig Pfeiffer Hoch- und 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.
- 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 (6); 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.

10. The contract for implementation of RA-01 was signed on January 17, 2017 with AS Inchaat-N, LLC (Azerbaijan). The date of completion of the contract is April 2020 and further extended to September 2020.
11. 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 300m³, water pipes and sewage collection system.
12. The contract for implementation of GUD-02 sub-project was signed on 4 January 2019 with "China Nuclear Industry 28 Construction Co." LTD (CNI28). The date of completion of the contract is April 2021.
13. Supervision Consultant for T4 of USIP, Supervision Consultant for Tranche 4 of USIP is "SAFEGE France with Engineering Solution LLC Georgia".

1.2 Coronavirus

14. Coronaviruses are a large family of viruses that cause respiratory infections. These can range from the common cold to more serious diseases. Coronavirus (COVID-19) is a disease caused by a new form of coronavirus. It was first reported in December 2019 in Wuhan City in China.
15. Health authorities around the world believe the coronavirus (COVID-19) is spread from close contact with an infected person, mostly through face-to-face contact or between members of the same household. The coronavirus (COVID-19) is spread by people with symptoms when they cough or sneeze. People may also pick up the coronavirus (COVID-19) from surfaces contaminated by a person with the infection.
16. Studies suggest that COVID-19 may persist on surface for a few hours or up to several days. This may vary under different conditions such as the type of surface, temperature or humidity of the environment.
17. A coronavirus infection can cause mild to severe respiratory illness. The most common coronavirus (COVID-19) symptoms reported are:
 - Fever
 - Breathing difficulties and breathlessness
 - Cough
 - Sore throat
 - Fatigue or tiredness.
18. Coronavirus (COVID-19) is most likely to spread from person-to-person through:
 - Close contact with an infected person.
 - Touching objects or surfaces (such as door handles or tables) contaminated by a person with the infection.
 - 19. Close contact meant having face-to-face contact for more than 15 minutes with someone who has a confirmed case of coronavirus (COVID-19) – or alternatively sharing a closed space with them for more than two hours.
 - 20. Close contact can happen in many ways, but examples include:
 - Living in the same household or household-like setting (for example, a boarding school or hotel)
 - Direct contact with the body fluids or laboratory specimens of a confirmed case
 - Being in the same room or office for two hours or more.
 - Face-to-face contact for more than 15 minutes in some other setting such as in a car or a lift or sitting next to them on public transport.

2. PURPOSE

21. The purpose of this document for the Construction sector, is to:
 - Provide direction to employers and workers
 - Outline the steps to be taken to best provide a safe and healthy environment, and
 - Identify the action available in the event of interruption to building and construction work, as a result of the coronavirus (COVID-19) pandemic.
22. The Document is intended to have application across all sectors of the building and construction sector. Construction sites are diverse and vary in complexity. To allow for flexible interpretation of these guidance, it is recommended that employers apply a risk-based approach and implement reasonably practical controls based on the environment and specific hazards at each construction site.
23. This Document have been developed to maintain the safe operation of construction sites, ensuring the safety of workers.
24. Following of these recommendations these is necessary to minimize and avoid the closure of any construction site.
25. The recommendations apply to all personnel attending on a building and construction site or project, whether management, staff, employees, contractors or service providers.

3. CONTROLLING RISKS ON SITE

26. To assist with providing and maintaining safe operations during coronavirus (COVID-19) the below measures should be implemented to assist in providing a safe and healthy environment at work:

- Screening workers coming to site
- Workplace Mapping
- Physical Distancing
- Hygiene
- Shared Tools, Plant and Equipment
- Cleaning and Disinfecting
- Personal Health
- Personal Protective Equipment
- Common Areas
- Inspections
- Travel
- General Communications
- Other measures
- Vulnerable workers

3.1 Screening workers coming to site

27. To minimise the risk of transmission of coronavirus (COVID-19) on site, employers must implement a two-phase screening process: phase one being an initial declaration and phase two or going daily screening.

28. Initial declaration is to be conducted by all workers (this includes any person who attends site), including current and new starters. Each worker must provide a declaration that they to the best of their knowledge:

- have not been diagnosed with coronavirus (COVID-19) in the last 14 days, or
- are not in a period of 14 day quarantine as directed by a health professional, or
- have not been overseas in the last 14 days, or
- have not been in contact with anyone who has coronavirus (COVID-19), or
- have not been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
- do not have anyone in their household who has symptoms consistent with COVID-19.

29. Once the initial declaration has been made by the worker, ongoing screening (phase 2) should be conducted for every worker prior to the start of their shift, asking to the best of their knowledge:

- have they been overseas in the last 14 days, or
- have they been in contact with anyone who has coronavirus (COVID-19), or
- have they been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
- do they have anyone in their household who has symptoms consistent with COVID-19.

30. If a worker declares any of the above they may be required to self-isolate.

31. Screening should be conducted, whilst maintaining safe distances or over the phone before entering site, on a mobile app, via text message system, or other non-contact methods. It is advisable to have a system in place that limits the sharing of pens/ notebooks/ computers etc.

32. If a worker has recently had close contact with a confirmed case, they need to:

- self isolate at home for a period of 14 days and follow the self isolation Guidelines.
- not attend work
- contact their employer
- seek urgent medical attention if they have symptoms consistent with COVID-19
- not return to work until they have been cleared by a medical practitioner.

33. If a worker is experiencing symptoms consistent with COVID-19 or had close contact with a confirmed case, they must:

- not attend work
- contact their employer for further advice and;
- not return to work until they have been cleared by a medical practitioner.

3.2 Workplace Mapping

34. In the event of an employee being confirmed as having COVID-19, those who are potentially affected need to be quickly identified.

35. Employers should implement processes to record the schedule and work locations for workers that enables tracing of those who have come into contact with the confirmed case.

36. The record should include:

- day and time work was undertaken
- members of teams that worked together
- specific work area on the construction site

- any breaks taken, including time and location

37. Movement between sites, or areas within large sites, should be minimized as much as possible.

38. Where attending multiple sites is necessary (e.g. for HSRs, first aiders, emergency wardens) movement between sites should be recorded in the workplace mapping.

3.3 Physical Distancing

39. Physical distancing of at least 1.5-2 meters should be implemented whenever possible. Employers should consider each work task and whether there is a safe alternative way to undertake the work with an increased distance between workers.

- Mark safe distances in work, transit and break areas (e.g. on floors and walls).
- Consider different shift patterns to minimize the number of workers onsite (e.g. AM/PM shifts).
- Stagger start times, breaks and finish times to avoid congestion in high traffic areas and minimize workers coming into contact with each other as they move around the site.
- Plan for how physical distancing will be maintained during inclement weather (e.g. use of lunch or air breaks and amenities).
- Install temporary physical barriers (e.g. fences, screens) between work areas, where appropriate.

40. Where it is not possible to undertake work tasks and maintain physical distancing, other control measures need to be implemented, for example:

- Minimize the number of worker to worker interactions that need to be completed within 1.5 meters
- Minimize the number of workers involved in activities that need to occur within 1.5 meters of each other
- Provide personal protective equipment (PPE) (e.g. gloves, masks, glasses).

41. Where essential work activities need to be undertaken in restricted spaces (e.g. lift shafts, personnel hoists, lifts), the number of workers working in the space should be minimized.

3.4 Hygiene

42. Good hygiene practices and general cleaning helps with minimizing the spread of coronavirus (COVID-19). Employers should review general hygiene requirements and the cleaning regimes in place.

43. Employers should display health information in prominent locations on the construction site such as tea rooms, site offices, toilets, flyers, lifts and site entrances.

44. Every effort must be made by employers to upgrade personal hygiene and minimize worker to worker contact and all workers must co-operate in all necessary measures to achieve these objectives. These measures need to include:

- Promote regular hand washing with soap for at least 20 seconds. Employers must facilitate regular hand washing by providing ease of access/additional facilities where possible. Communicate to all workers where hand sanitizers are located and encourage their regular use.
- Promote good cough etiquette by covering your cough and sneeze, or cough into your elbow or shoulder.
- Avoid touching your nose, eyes or mouth.
- Provide hand sanitizer and/or hand washing facilities with soap in all site entrances and exits hoists, amenities and areas/levels of the site.

45. Employers must ensure that workers have access to appropriate amenities. Employers should review and revise the number and locations of amenities, to reduce movement around the site.

46. Amenities need to include:

- Hand washing facilities (whether permanent or temporary), such as a wash basin, clean running water, soap and paper towels, placed in strategic locations to ensure employees can access them in a timely manner.
- Access to hand sanitizer.
- Rubbish bins with touch-free lids (e.g. foot pedal bins).
- Thorough and regular sanitation.
- Appropriate waste management systems.

3.5 Shared tools, plant and equipment

47. Workers should avoid the shared use of tools, plant and equipment whenever possible. For example, drop saws, drills, grinders, ladders or elevating work platforms should not be used by more than one worker.

48. Where it is not possible to eliminate shared use:

- Provide cleaning products (e.g. alcohol spray or solution) where communal tools, plant and equipment are located.
- Keep cleaning products with tools, plant and equipment as they move around the site.
- Ensure all operators thoroughly wash or sanitize their hands before and after every use.
- Ensure all parts of tools, plant and equipment (e.g. including handles, handrails) are wiped down before and after use.

49. The shared use of phones, desks, offices, computers and other devices should also be avoided. Where this is not possible, these items should be regularly disinfected.

3.6 Cleaning and Disinfecting

50. Cleaning and disinfecting of surfaces is to be conducted using cleaning products as per DHHS Cleaning and Disinfection guidelines to reduce coronavirus (COVID-19) Transmission – the specific guidance is available here:

- Cleaning and disinfection of amenities and meal areas must occur between work group breaks.
- Cleaning and disinfection of Personnel Hoists should occur at the end of each hoist operator shift.
- Implement regular cleaning and disinfection (minimum of twice daily) to 'Frequently Touched Surfaces', surfaces such as toilets, door handles, stair handrails, light switches, lift buttons, table tops.
- Additional cleaning/disinfecting on-site. There must be an increased frequency of industrial grade cleaning/additional cleaning/disinfecting on sites across all areas including particular emphasis on commonly touched/communal surfaces.

3.7 Personnel hoists

51. Workers using hoists and lifts may be at greater risk of exposure to coronavirus (COVID-19), because they are required to be in close contact with others and potentially contaminated surfaces.

52. Control measures to reduce the risk in personnel hoists should include systems of work, physical distancing, personal hygiene, PPE and cleaning.

53. It is acknowledged that not all hoists and lifts are identical in size or dimension, and have varying weight limits.

54. Where it is not possible to implement physical distancing measures in a personnel hoist, all other available control measures need to be used.

55. Control measures may include:

- Limiting worker movement between levels and floors on site, where it is possible and safe to do so.
- Reviewing which hoists are available for use on site and identifying if additional hoists can be used (for example where a partially occupied building is under construction, consider whether a residential lift be used solely for construction persons).
- Physical distancing of 1.5-2 m and hygiene systems to be followed when waiting for hoist, particularly on floors where worker volumes may increase during peak times (start, break, finish times). For example the ground floor, floors with meal or break out spaces and floors with bathroom amenities.

• Determine how many workers can use a hoist at any time (including hoist operator) taking into consideration the limited duration and additional control measures in these Guidelines.

• Mark out hoist floor, identifying:

- where workers stand
- what direction they are to face when in the hoist to avoid face to face contact
- sequencing of entering and exiting.

• Mark the hoist waiting area at each floor ensuring the physical distancing is maintained

• Regularly communicate and remind workers (e.g. through posters, digital displays):

- diagram of positioning of workers and sequence of worker entering
- not to touch walls/floors of the hoist
- advise the cleaning regime in place

• During peak periods have system in place to limit crowding of workers entering/exiting the work area. For example:

- developing a schedule for use of the hoist
- staggering what floors workers are to use the hoists. Hoist operators may be exposed to additional risk. They should:

• Be provided with PPE that protects them from worker to worker transmission and from touching contaminated surfaces (e.g. face shield or surgical mask/P2 respirator and gloves).

• Perform frequent hand washing with soap and water or the application of hand sanitizer positioned within the hoist.

• Where possible, change hoist operator every two hours into a different role.

3.8 Personal Protective Equipment (PPE)

56. Employers must provide information, instruction and training on the safe use, decontamination and maintenance of any PPE provided.

57. Any PPE provided needs to be practical for the work environment (e.g. allowing the necessary visibility and mobility) and properly decontaminated or disposed of at the end of every shift.

58. Employers should monitor and encourage correct use of PPE, for example providing information on posters and digital screens about:

- Washing or sanitizing hands before putting PPE on, and putting face protection on before gloves.
- Removing gloves before face protection, washing or sanitizing hands after removing PPE and decontaminating or disposing of used PPE safely.

3.9 Common areas

59. Common areas on sites such as the amenities pose risks, and these are reduced by ensuring the following measures are adopted.
60. The time spent in those areas must be limited so as not to breach time constraints recommended by DHHS.
61. Staggering of meal breaks and separation of work groups to achieve maximum personal space and reduce the number of workers accessing these areas at any one time consistent with the Government requirements.
62. Sanitization must occur between occupation of amenities by different work groups.
63. Spread out furniture to ensure physical distancing measures in common areas.
64. There must be an increased frequency of industrial grade cleaning/additional cleaning with specific emphasis on cleaning after each meal break in those areas.
65. Workers electing to minimize amenity access.
66. Staggered working hours must be considered on sites with appropriate consultation (consideration must be given to Construction Management Plans, and workers must be given adequate notice of a change in hours).

3.10 Inspections

67. During inspections of the sites everyone should ensure all measures are in place to ensure compliance. Employers and Health and Safety Representatives are encouraged to work together to assist in this important objective.

3.11 Travel

68. Adequate arrangements are to be made by workers to ensure their travel to and from work is conducted safely in accordance with Government advice, and that adequate sanitization facilities are in place for workers upon attending the work site and when returning to the work site during work.
69. Workers should ensure that for transport to and from work that they adhere to the hygiene and cleaning guidance, and the physical distancing.
70. Work vehicles that are shared should be regularly cleaned to ensure adequate hygiene and protection.

3.12 General Communication

71. Ensuring everyone is informed is fundamental to managing this pandemic and ensuring the safe operations of construction sites.
72. These recommendations have been developed to be communicated to all employees, workers and stakeholders. Everyone is urged to regularly promote and adhere to this document.

73. Site inductions should be updated to incorporate the latest information on coronavirus (COVID-19) potential risks and workplace specific controls that have been implemented such as daily screening, health checks and symptoms of coronavirus (COVID-19), staggered start, finish and meal times, good hygiene practices, and cleaning regimes and PPE requirements.
74. Toolbox talks should be regularly conducted, and workers are to be encouraged to put forward practical ideas for changing work practices to avoid the spread of coronavirus (COVID-19). Toolbox talks should also provide clarity to workers on leave arrangements for those that cannot work, and to encourage self-reporting and minimize the spread of risk.
75. Toolbox talks should also include updates from the responsible Health Officer as they occur and additional information on the severity of the pandemic and the importance of physical distancing at toolbox meetings.

3.14 Other measures

76. Construction sites are diverse and vary in complexity, employers must apply a risk based approach and implement reasonably practical controls (as per the referenced and specific hazards at each construction site. In addition to the aforementioned measures and controls mentioned in this section, employers should consider other measures for implementation such as:
 - using alternatives to face-to-face meetings where practicable;
 - reducing the length and size of meetings, especially for critical employees; by requiring same or all to dial in;
 - consider off-site collaboration;
 - ensuring working from home arrangements are enabled where feasible;
 - Structuring management teams to ensure continuity in the event all team members needing to be reduced or quarantined at times.

3.15 Vulnerable workers

77. It has been identified the following groups of people as vulnerable workers in relation to coronavirus (COVID-19):
 - people over the age of 70;
 - people with chronic diseases (cardiovascular disease, diabetes, bronchial asthma and other respiratory diseases)
78. Where practical, reasonable action should be taken to minimize our vulnerable workers from assuming higher risk roles.

4. Summary of recommendations and responsibility

Table of Summary of recommendations and responsibility

ANNEX G: LIST OF TRAINING PARTICIPANTS, GUD-02, 15 SEPTEMBER 2021

The image shows a handwritten form titled "Indonesia - Gender Training Course Form". The form includes fields for "Name", "Address", and "Contact". Below these fields is a large table with three columns: "Name", "Address", and "Contact". The table is filled with handwritten entries, likely representing the list of training participants. The handwriting is in blue ink and is somewhat cursive. The form is placed on a white background, and the entire image is framed by a dark border.