Semi-annual Environmental Monitoring Report

#18 Semiannual Report

(Reporting Period: July-December 2024)

Loan Number: 3238

Project Number: 43405-026

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
CAP	Corrective Action Plan
DC	Design Consultant
DPEPSA	Department of Permits, Environmental Protection and Social Affairs
DMPFDO	Department of Management of Projects Financed by Donor Organizations, Deputy Head
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
ERP	Emergency Response 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
LLC	Limited Liability Company
MFF	Multi-tranche Financing Facility
MoEPA	Ministry of Environment Protection and Agriculture
MoRDI	Ministry of Regional Development & Infrastructure
NEA	National Environmental Agency
PS	Pumping Station
SAEMR	Semi-Annual Environmental Monitoring Report
SC	Supervision Consultant
SIEE	Supplementary Initial Environmental Examination
USIIP	Urban Sector Improvement Investment Program
UWSCG	United Water Supply Company of Georgia
WS	Water Supply
WSS	Water Supply &Sanitation
WWTP	Waste Water Treatment Plant

Contents

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-December 2025.

2. This report is the 18th Semi-Annual EMR for the T4 of USIIP.

1.2 Headline Information

3. The construction activities and current status of the projects under USIIP/T4 are as follows:

- Construction of Water Supply System in Zugdidi – ZUG-01 (Completed in March 2022)
- Construction of Sewerage System in Poti – POT-01 (on-going)
- Construction of Wastewater Treatment Plant in Poti - POT-02 (terminated)
- Construction of Water Supply System in Jvari - JVARI-01 (completed)
- Construction of Sewage Collection and Water Supply System in Gudauri - GUD-02 (completed)

4. During the reporting period, civil works were carried out only under the POT-01 (LOT-02, LOT-03) sub-project within the USIIP/T4. Therefore, this report focuses on the activities completed within these specific sub-project. As previously mentioned, all other activities within the USIIP/T4 were completed in earlier reporting periods. Additional details on the implementation status of these projects are provided in Chapter 2 below.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

5. 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 (MFF). 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.

6. The Investment Program improves infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sanitation) in one town. Sub-projects rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works include sewer network, pumping stations, main collectors and waste water treatment plants.

7. Tranche 4 of the Investment Program includes:

- Construction of Water Supply System in Zugdidi – ZUG-01
- Construction of Sewerage System in Poti – POT-01
- Construction of Wastewater Treatment Plant in Poti - POT-02
- Construction of Water Supply System in Jvari - JVARI-01
- Construction of Sewage Collection and Water Supply System in Gudauri - GUD-02

8. **Construction of Water Supply System in Zugdidi (ZUG 01)**. The project comprised 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.

9. The contract ZUG-01 was signed on October 26, 2015 with AS Inshaat–N, LLC (Azerbaijan), and the construction works were completed in September 2018 and further extended until October 2021. All construction works under ZUG-01 sub-project were competed in March 2022.

Post-Construction Environmental Audit under ZUG-01 Sub-project

10. **The Post-construction Environmental Audit Report** within the framework of the ZUG-01 subproject was prepared by the Supervisory Consultant of USIIP/T4 - "SAFEGE France with Engineering Solution LLC Georgia" in October 2023.

11. Based on the Post-construction Environmental Audit Report, the contractor has promptly resolved all non-compliances identified within the ZUG-01 sub-project. There were no outstanding environmental issues related to ZUG-01.

12. **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 was continuing works under Delay Damages and finally the works under POT-01 sub-project was terminated on 07.04.2022 and it was proposed rebidding of work under 3 lots. Detailed information on current status of POT-01 sub-project (all three lots) is provided in paragraphs 13-23 below.

13. **The contract for the implementation of POT-01/LOT-01 sub-project** was awarded to the construction company 'ECETAS Insaat' (Turkey) in October 2022. The original completion date was March 2024 (aligned with the MFF closing date), but construction works were not completed by this deadline. As a result, the project will continue under Government Funding until the end of March 2025, following the closure of the MFF in March 2024. A brief description of LOT-01 and its scope of work is provided below.

14. **Lot 1: Sewage System:** The new sewage system considers the continuation of the existing system. Therefore, all new sewers are orientated to the new or replaced old pumping stations. The Contractor's works include the following major works:

- Verification of the existing topographical survey and performance of additional topographical survey (if verification reveals need of survey);
- Verification of the existing basic and detailed design prepared by Design Company Kocks as well as the details and shop drawings prepared by the previous contractor and performance of additional design, shop drawings if would be necessary;
- Installation of sewer gravity lines and house connections, including testing and CCTV investigation;
- Installation of pressure lines including testing;
- Road reinstatement and any other related works

15. The new pipes to be laid under this lot include:

- Corrugated DN 150 HDPE-pipes for service connections, ring stiff-ness 8 KN/m²
- Corrugated DN 200 to DN 800 HDPE-pipes for gravity sewers, ring stiffness 8 KN/m²
- PE 100-pipes for OD 140 to OD 500 pressure mains, SDR 17

16. **The Post-construction Environmental Audit Report** under the POT-01/LOT-01 sub-project will be prepared by the Supervision Consultant SAFEGE and submitted to UWSCG in April 2025.

17. **Lot 2: Sewage System:** The contract for the implementation of the Lot-02 under POT-01 has been awarded to "MBD Inssat" (Turkey) in October 2022. The project Completion date was March 2024, but construction works were not completed by this time and was extended until the end of March 2025 under Government Financing, as MFF was closed in March 2024. A brief description of LOT-02 and its scope of work is provided below.

18. The new sewage system considers the continuation of the existing system, orientated to the new or replaced old pumping stations. The Contractor's works include the following major works:

- Verification of the existing topographical survey and performance of additional topographical survey (if verification reveals need of survey);

- Verification of the existing basic and detailed design prepared by Design Company Kocks as well as the details and shop drawings prepared by the previous contractor and performance of additional design, shop drawings if would be necessary;
- Installation of sewer gravity lines and house connections, including testing and CCTV investigation;
- Installation of pressure lines including testing;
- Road reinstatement and any other related works;
- All needed crossings

19. The new pipes to be laid under this lot include

- Corrugated DN 150 HDPE-pipes for service connections, ring stiff-ness 8 KN/m²
- Corrugated DN 200 to DN 800 HDPE-pipes for gravity sewers, ring stiffness 8 KN/m²
- PE 100-pipes for OD 140 to OD 500 pressure mains, SDR 17

20. The Post-construction Environmental Audit Report under the POT-01/LOT-02 sub-project will be prepared by the Supervision Consultant SAFEGE and submitted to UWSCG in April 2025.

21. **Lot 3: Sewage System:** The contract for the implementation of the Lot-03 under POT-01 has been awarded to "CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) in October 2022. The project completion date was March 2024, but Civil Work was not completed by this time and was extended until the end of March 2025 under Government Financing, as MFF was closed in March 2024. The proposed project includes construction and rehabilitation of 28 sewerage Pumping Stations in Poti under POT-01 sub-project.

22. **The Post-construction Environmental Audit Report** under the POT-01/LOT-03 sub-project will be prepared by the Supervision Consultant SAFEGE and submitted to UWSCG in April 2025.

23. **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 Gmbh7Co. KG (Germany)" and "EMIT Group – ErcoleMarelliImpiantiTecnologiciS.r.l. (Italy). Due to bankruptcy of Ludwig Pfeiffer in December 2021, there were not any construction activities and physical progress. The Supervision Consultant notified in March 2022 the Contractor to restart activities on site. But there were no reaction from Contractor's side. In April 2023, the Engineer submitted revised Recommendation for Termination of the POT-02 to UWSCG. The POT-02 sub-project was finally terminated and UWSCG received the final decision and a no-objection from ADB in October 2023. It is planned to prepare tender documentation and to announce a new tender for the completion of the POT-02 sub-project, during the next reporting period, January-June 2025.

24. **Construction of Water Supply System in Jvari (JVA-01)**. The major works implemented for rehabilitation and improvement of Jvari water supply system are following: construction of 8 wells on the well field near the village Lia; installation of more than 4 km (4,558m) long transmission pipeline (DN300); replacement of distribution pipes (43,500m of DN90-200 pipes) in the town; rehabilitation of existing reservoir of 120m^3; installation of 150 hydrants and 2500 meters.

25. The contract for the implementation of JVARI-01 was signed on January 17, 2017 with AS Inshaat–N, LLC(Azerbaijan) and was completed in February 2024.

26. **The Post-construction Environmental Audit Report for the JVARI-01 sub-project** was prepared by the Supervision Consultant SAFEGE and submitted to UWSCG in February 2024. All non-compliances identified during the PCEAR were eliminated by contractor and there were no outstanding issues under JVARI-01 sub-project.

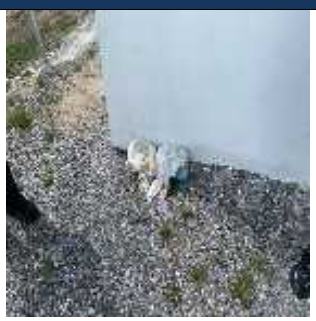
27. **Construction of Sewage Collection and Water Supply System in Gudauri (GUD-02).** The major works to be implemented for rehabilitation and improvement of Gudauri sewage collection and water supply system, including construction of well field, Raw Water Reservoir of 500m3, water pipes and sewage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

28. 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 November 2021. Contractor completed most of works by this deadline and prepared Partially Taking Over for Sewerage Network, Reservoir and Borehole N1. Due to the fact that delay damages for Borehole N2 and N3 were still to be finalized, the final completion date was extended until the end of November 2024. The works were finalized in November 2024 and the project was completed.

29. **The Post-construction Environmental Audit Report** under the GUD-02 sub-project was prepared by the Supervision Consultant SAFEGE and submitted to UWSCG in December 2024 (please see Annex D). The main findings of the PCEAR are presented in Table 1 Below:

Table 1: Non-compliances and Progress of Corrective Actions

#	Non-compliance/Observation	Required action and term	Responsible person	Progress of Corrective Actions
1	**Non-compliance 1**: Construction waste is uncontrollably dumped on the territory of the Gudauri Reservoir	Construction waste should be removed and disposed accordingly until the end of December 2024, Photo N1  Photo N2	UWSCG	Improved, construction waste was removed from the territory and disposed accordingly, December 2024, Photo N1  Photo N1

#	Non-compliance/Observation	Required action and term	Responsible person	Progress of Corrective Actions
				
2	**Non-compliance 2**: Oil Spill was identified on the project area of the Gudauri Reservoir	Fuels and lubricants spills should be eliminated. The territory should be cleaned and reinstated and oil contamination should be removed until the end of December 2024 Photo N1 	UWSCG	Improved, December 2024, Photo N1 
3	**Non-compliance 3**: The area around the well fields inside the fence was contamination with animal fecal matter	The area of the well fields must be cleaned promptly, the gate should be closed to prevent accidental entry of people and animals into the well field area until the end of December 2024, Photo N1 	UWSCG	Improved, December 2024, Photo N1 

30. Based on the Post-construction Environmental Audit Report, UWSCG has promptly resolved all non-compliances identified within the GUD-02 sub-project. There are no outstanding environmental issues related to the project.

31. **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

32. The main institutions that are involved in implementation of the IEE/EMP under USIIP/T4 are UWSCG executing agency (EA), Supervision Consultant (SC) the Construction Company (CC) and to a lesser extent the Ministry of Environmental Protection and Agriculture of Georgia (MoEPA).

33. The Investment Program Management Office (IPMO) under UWSCG, is the Department of Management of Projects Financed by Donor Organizations, which is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist Ms. Kate Chomakhidze who is responsible for managing the environmental aspects of the USIIP. The Deputy Head of the department is Mr. Nodar Rostomashvili.

34. The IPMO Environmental Specialist's 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) Develop SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and summary of 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

35. The SC/SAFEGE hired a full time Environmental Specialist, Mr.Shalva Bosikashvili to assist the UWSCG oversee day-to-day implementation of EMPs by contractors under USIIP/T4, including compliance with all government rules and regulations; Support IPMO in the review and endorsement of contractor's SSEMP; Conduct inspections on contractor's implementation of SSEMP and compliance with government rules and regulations; Ensure contractors comply with health and safety requirements per approved SSEMP's Health and Safety Management Plan; Conduct investigations on grievances/complaints, incidents and accidents; Assist IPMO in addressing any grievances in a timely manner as per the GRM; Issue non-compliance notifications to CC; Monitor corrective actions as required in CAPs, and ensure non-compliances are resolved immediately and are not occurring repeatedly; Prepare recommendations for contractors repeated non-compliances on safeguards and EHS requirements; Submit

monthly and quarterly environmental monitoring reports to IPMO.

36. The Construction Companies also appointed a full time Environmental specialists under POT-01 (LOT-01, LOT-02 and LOT-03), JVA-01 and GUD-02 sub-projects. More detailed information is provided in the Table 2 below. The contractor's Environmental Specialists are responsible for preparing the Site Specific Environmental Management Plans (SSEMPs) for endorsement by Supervision Consultant and approval by the UWSCG prior to the Contractor taking possession of the construction site and provide pre-works photo documentation; Ensuring the SSEMP is implemented effectively throughout the construction period; Establish and maintain site records of weekly site inspections using checklists based on SSEMP; Establish and maintain environmental accidents/incidents including resolution activities and environmental monitoring data; Developing Corrective action plans in response to non-compliance notices issued by the SC and UWSCG; Conduct Community relations activities including maintaining complaints register; Routine reporting of SSEMP compliance and community liaison activities; Implement Occupational Health and safety requirements. Implement site clean-up measures after civil works finalization.

37. UWSCG has Department of Permits, Environmental Protection and Social Affairs (DPEPSA) working alongside IPMO to address the environmental and social issues of USIIP. The head of the department is Ms. Maka Goderdzishvili. DPEPSA has two divisions, the Division of Permits and the Division of Environmental Protection and Social Affairs. Ms. Salome Mosidze is the Head of the Division of Environmental Protection and Social Affairs.

38. More detailed description of EMP implementation arrangements, responsibilities and staffing under UWSCG is provided in the **Table 2 below**.

Table 2: Institutionnel Arrangement, Responsibilities and Staffing

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Department of Permits, Environmental Protection and Social Affairs (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 SEMP approved by IPMO.	Review and endorse the SEMP; Monitor implementation of SEMP on daily basis; Monitor monthly environmental monitoring reports or results prepared by the Contractor and report to IPMO.	Review and approve the SEMPs; 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 SEMP; Implement updated SEMP.	Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMP.	Review the updated IEE and/or SEMP and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMP; Upload the approved IEE/SEMP 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 SEMP	Review the updated IEE and/or SEMP and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMP

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Department of Permits, Environmental Protection and Social Affairs (Environmental Specialist)
4	**Reporting**	Prepare monthly environmental monitoring reports and send it to CSC and IPMO	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.	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)	Department of Permits, Environmental Protection and Social Affairs (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	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

39. A list of main organizations involved in the USIIP/T4 and relating to environmental safeguards is presented in Table 3 below.

Table 3: 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
		Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 577 44 09 90 nnadashvili@adb.org
		ADB RETA, Environmental Consultant	George Kobaladze Tel: +995 599 689834 E-mail gkobaladze.consultant@adb.org, me
Borrower	UWSCG	UWSCG, Department of Permits, Environmental Protection and Social Affairs, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Management of Projects Financed by Donor Organizations, Deputy Head	Mr. Nodar Rostomashvili Tel: +995 597 181111 E-mail: **n.rostomashvili@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
Contract JVA-01	AS Inshaat–N, LLC(Azerbaijan)	Environmental H&S Specialist	Mr.Gia Khulordava Tel: + 995 577 345049
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/LOT-01	"ECETAS Insaat" (Turkey).	Environmental H&S Specialist	Mr.Vakhtang Burchuladze Tel: +995 577 477432 E-mail: v.burchuladze1@gmail.com
Contractor POT-01/LOT-02	"MBD Inssat" (Turkey).	Environmental H&S Specialist	Mr.Vakhtang Burchuladze Tel: +995 577 477432 E-mail: v.burchuladze1@gmail.com
Contractor POT-01/LOT-03	"CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China)	Environmental H&S Specialist	Mr.Vakhtang Burchuladze Tel: +995 577 477432 E-mail: v.burchuladze1@gmail.com

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Contractor POT-02	JV "Pfeiffer - EMIT" comprised by "Ludwig Pfeifer Hoch – and TiefbauGmbh7Co. KG (Germany)" and "EMIT|Group – ErcoleMarelliImpianti TecnologiciS.r.l. (Italy)	Environmental Specialist H&S Specialist	Mr.Nikoloz Neparidze Tel: +995 599 346 821
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

40. During the reporting period construction activities were carried out only under POT-01/LOT-01/LOT-02/LOT-03 sub-project, therefore this sub-project is reported in this Semi-annual EMR.

41. The main activities under POT-01/LOT-01 sub-project, carried out by contractor during the reporting period, July-December 2024 is provided in the Table 4 below:

Table 4: POT-01 LOT-1, project progress during July-December 2024

HDPE PRESSURE PIPES PERFORMED ACTIVITIES CONTRACT	Completed Total (m)	Completed Total (%)	Executed during July-December 2024
Ø 140 (mm) : 940	620	65.9%	0
@ 180 (mm): 560	377	67.3%	0
Ø 280 (mm) : 535	535	100%	0
Ø 400 (mm) : 1000	882	88.2%	249
Ø 450 (mm) : 1176	799	67.9%	0
Ø 500 (mm) : 2365	2458	122 %	0
Ø 6300 (mm) : 0			

HDPE PRESSURE PIPES PERFORMED ACTIVITIES CONTRACT	Completed Total (m)	Completed Total (%)	Executed during July-December 2024
TOTAL = 6576	5671	86.2%	249
HDPE GRAVITY CORRUGATED PIPE IN LINEAR METER			
Ø 150 (mm) : 26693	24419	91.4%	741
Ø 200 (mm) : 11120	11414	102.64%	829
Ø 300 (mm) : 15506	14058	90.6 %	145
Ø 400 (mm) : 723	636	87.95%	0
Ø 500 (mm) : 1652	1516	91.74%	0
Ø 800 (mm) : 77	66	85.71	0
TOTAL = 55771	52109	93.4 %	1715

42. The main activities under POT-01/LOT-02 sub-project, carried out by contractor during the reporting period is provided in the Table 5 below:

Table 5: POT-01 LOT-2, project progress during July-December 2024

HDPE PRESSURE PIPES PERFORMED ACTIVITIES CONTRACT	Completed Total (m)	Completed Total[%]	Executed during July-December 2024
Ø 140 (mm) : 0	0	0%	0
@ 180 (mm): 577	1058	183.3%	0
@ 225 (mm): 880	696	79%	0
Ø 280 (mm) : 212	0	0%	0
Ø 315 (mm) : 145	0	0%	0
Ø 355 (mm) : 760	0	0%	0
Ø 400 (mm) : 990	0	0%	0
Ø 450 (mm) : 0	0	0%	0
Ø 500 (mm) : 0	0	0%	0
Ø 6300 (mm) : 0	0	0%	0
TOTAL = 3564	1754	49.2%	0
HDPE GRAVITY CORRUGATED PIPE IN LINEAR METER			
Ø 150 (mm) : 33885	20011	59%	905
Ø 200 (mm) : 15465	12038	77.8%	510
Ø 300 (mm) : 22092	17402	78.7 %	1149
Ø 400 (mm) : 3117	426	13.6%	0
Ø 500 (mm) : 289	141	48.7%	0
TOTAL = 74848	50018	66.8%	2564

43. The main activities under POT-01/LOT-03 sub-project, carried out by contractor

during the reporting period is provided in the Table 6 below:

Table 6: POT-01 LOT-3, project progress during July December 2024

HDPE PRESSURE PIPES PERFORMED ACTIVITIES CONTRACT	Completed Total	Completed Total[%]	Executed during July-December 2024
Construction of 28 Pumping Stations			
11 reinforced concrete	Pile works Civil works Mechanical Installation	100% 90% 35%	0% 55%
16 small PE	Started installation (Installed 6pc)	37%	40%

2.4 Description of Any Changes to Project Design

44. 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

45. 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

46. A total of 11 site visits were conducted at different times during the reported period (July-December 2024) by the environmental team of UWSCG/IPMO, SC, and ADB under the POT-01/LOT-01/LOT-02/LOT-03 and GUD-02 sub-projects. These visits included monitoring compliance with the IEE/EMPs and SEMPs requirements for construction activities. During these inspections, 21 non-compliance were identified under the POT-01 sub-project, including 3 non-compliances under POT-01/LOT-01, 6 non-compliances under POT-01/LOT-02 and 12 non-compliances under POT-01/LOT-03. 10 Non-Compliance Notices (NCNs) were issued to contractors to address and rectify the identified issues, including 1 NCN for POT-01/LOT-01, 4 NCNs for POT-01/LOT-02, and 5 NCNs for POT-01/LOT-03. Detailed findings of all significant non-compliances observed during these site visits are outlined in Table 7 below.

47. During the reporting period, the ADB's Environmental Safeguard Mission, led by Ms. Nino Nadashvili, Safeguards Officer at the Georgia Resident Mission of the Asian Development Bank, conducted visits to USIIP/T4 construction sites, including Poti under the POT-01/LOT-01/LOT-02/LOT-03 sub-project on 16 October 2024, and Gudauri under the GUD-02 sub-project in October 2024.

48. In addition during the reporting period Environmental Monitoring Specialist hired by CC under the POT-01/LOT-01/LOT-02 and LOT-03 sub-project, Mr. Vakhtang Burchuladze conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Safege.

49. Environmental Monitoring Specialists of SC/Safege Mr. Shalva Bosikashvili developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.

50. Environmental Specialist of UWSCG/USIIP Ms. Kate Chomakhidze developed Semi-Annual Environmental Monitoring Report under USIIP T4 and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.

3.2 Site Audits

51. As mentioned above, during the reporting period from July to December 2024, inspections and monitoring of construction sites were conducted by the Environmental Specialists (ESs) of UWSCG/IPMO and Safege under USIIP/T4. Since all project activities under Tranche 4, except for the POT-01 sub-project, have been completed, only this sub-project was monitored. The schedule of joint inspections and the summary of audits carried out under POT-01/LOT-01/LOT-02/LOT-03 are provided in Table 7 below.

Table 7. 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 2024)	**POT-01/LOT-01/LOT-02/LOT-03**	Environmental Specialist of SC Mr.Shalva Bosikashvili	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
22 July 2024	Contractor: CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) POT-01/LOT-03	Environmental Specialist of SC Mr.Shalva Bosikashvili	Monthly Monitoring of Sites	Handmade unsafe ladder, Photo N1  Concrete spills, on the construction area, Photo N2	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-03 sub-project (Please see Annex C)	Completed, end of July 2024 Completed, end of July 2024, concrete is removed and territory is reinstated, Photo N1

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
						
23 July 2024	Contractor: "MBD Inssat" (Turkey). POT-01/LOT-02	Environmental Specialist of SC Mr.Shalva Bosikashvili Ms. Kate Chomakhidze UWSCG/USIIP/Environmental Specialist	Monthly Monitoring of Sites	LOT-02 Power generator without drip tray, Photo N1 	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-02 sub-project (Please see Annex C)	Completed. July 2024
24 July 2024	Contractor: "MBD Inssat" (Turkey).	Environmental Specialist of SC Mr.Shalva	Regular Monitoring of	Deep pit without barrier and warning sign, unauthorized persons at the construction	Non-compliance notice were	Completed, end of July 2024,

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
	POT-01/LOT-02	Bosikashvili	sites	site, Photo N1  Deep pit without barrier, Photo N2 	issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-02 sub-project (Please see Annex C)	Photo N1  Completed, please see Photo N2 
14 August 2024	Contractor: “ECETAS” POT-01/LOT-01	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of sites	Open trench without barrier/warning tape, warning sign, Photo N1	Non-compliance notice were issued to contractor and corrective actions were required	Completed, Mid. August 2024, Photo N1

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				 Worker without helmet in the trench, Photo N2  Person without PPE at the construction site	from contractor to immediately improve the situation, under POT-01/LOT-02 sub-project (Please see Annex C)	 Completed Mid. August 2024, Photo N2  Completed Mid. August 2024
15 August 2024	Contractor: “MBD Inssat” (Turkey). POT-01/LOT-02	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of sites	Deep pit without barrier and warning sign, Photo N1	Non-compliance notice were issued to contractor and corrective actions were required	Completed end of August 2024

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				 Worker without helmet in the trench	from contractor to immediately improve the situation, under POT-01/LOT-01 sub-project (Please see Annex C)	Completed Mid. August 2024
16 August 2024	Contractor: CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) POT-01/LOT-03	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of sites	**LOT3** Deep pit without barrier and warning sign, Photo N1  Rebar without capping, Photo N2	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-03 sub-project (Please see Annex C)	Completed end of August 2024  Completed end of August 2024

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
						
18 September 2024	Contractor: CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) POT-01/LOT-03	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of Sites	Unacceptable housekeeping, Photo N1  Generator without drip tray	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-03 sub-project (Please see Annex C)	Completed, end of September 2024, Photo N1  Completed, end of September 2024

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
22 October 2024	Contractor: CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) POT-01/LOT-03	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of sites	Unsafe wiring on construction site, Photo N1  Unsafe ladder on construction site, Photo N2  Worker without helmets on construction site, Photo N3	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-03 sub-project (Please see Annex C)	Completed, electric cables are softly removed from the construction site end of October 2024, Photo N2  Completed, unsafe ladder was removed from the construction site, immediately Completed,

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
				 Worker without PPE in the trench		immediately Completed, immediately
18 November 2024	Contractor: "MBD Inssat" (Turkey). POT-01/LOT-02	Environmental Specialist of SC Mr.Shalva Bosikashvili Ms. Kate Chomakhidze UWSCG/USIIP/Environmental Specialist	Regular Monitoring of Sites	Deep trenches without barrier and warning sign, Photo N1 	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-02 sub-project (Please see Annex C)	Completed, November 2024, Photo N1 

Date of Visit	Name of Company	Auditors Name	Purpose of audit	Summary of any Significant Findings	Cross Reference to Audit Report	Status of implementation
19 November 2024	Contractor: CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO" Ltd (China) POT-01/LOT-03	Environmental Specialist of SC Mr.Shalva Bosikashvili	Regular Monitoring of sites	Unacceptable housekeeping, Photo N1  Unacceptable housekeeping and unsafe ladder, Photo N2 	Non-compliance notice were issued to contractor and corrective actions were required from contractor to immediately improve the situation, under POT-01/LOT-02 sub-project (Please see Annex C)	Completed, end of November 2024 Completed, end of November 2024, Photo N1 

3.3 Issues Tracking (Based on Non-Conformance Notices)

52. As it was mentioned above, a total of 11 site visits have been conducted at different times during reported period (January-June 2024) under USIIP/T4/POT-01/LOT-01/LOT-02/LOT-03 and GUD-02 sub-projects to the IEE/EMP and SEMPs requirements.

53. During the reporting period, a total of 21 non-compliances were identified, compared to 11 NCs in the previous reporting period (January-June 2024) under all three lots of the POT-01 sub-project. This resulted in the issuance of 10 NCNs, as opposed to 6 Non-Compliance Notices to the contractor in the prior period.

54. The contractor was consistently notified of any detected non-conformances (NCs) and was required to take corrective actions within the specified deadlines. This included submitting a Corrective Action Plans (CAP) along with photographic evidence of the improvements made. The environmental teams from SAFEGE and UWSCG/USIIP monitored the progress of these improvements during subsequent visits. A key issue that requires ongoing attention is the safety of workers in deep trenches, particularly in the Pumping Stations and sewerage network. Although the contractor submitted CAPs in response to the NCNs issued by SC, there remains a risk that the required safety standards may not be consistently maintained. A detailed list of all Non-Conformance Notices issued during the reporting period can be found in ANNEX C of this Semi-Annual EMR.

55. A summary of the identified environmental issues under POT-01 (LOT-01/LOT-02/LOT-03) sub-project for July-December 2024 are presented in Table 8 below.

Table 8: Summary of Issues Tracking Activity for Current Period – POT-01/LOT-01/LOT-02/LOT-03

Total Number of Issues for Project	21
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	**20**
Percentage Closed	**95%**

3.4 Trends

56. To identify trends in environmental issues, information from previous Semi-Annual EMR (January-June 2024) was used. The summary of the issues is provided in the Table 9 below.

Table 9: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
January-June 2024	14	96%	4%

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
July-December 2024	21	95%	5%

57. Most of the non-compliances were eliminated by the contractors within the specified time frame within the POT-01 (LOT-01, LOT-02, LOT-03) sub-project. Some of the non-compliances identified during the site visits such as the protection of open trenches during the construction work still remains the problem, despite the regular site instructions on ESHS, issuance of notices of non-compliance, meetings and discussions with SC and CC representatives on HS safety issues. The required actions and deadline to improve the remaining inconsistencies are presented in table 27 below.

3.5 Unanticipated Environmental Impacts or Risks

58. There were no unanticipated Environmental Impacts and Risks under USIIP/T4 during the reporting period.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

59. During the reporting period Environmental measurements of Noise level and Ambient Air Quality were carried out by contractor only under POT-01 (LOT-01/02/-3) sub-project (Please see para 68-91 below).

60. Noise pollution standards defined by IFC/WHO 1999, is presented in the Table 10 below.

Table 10: Noise Level Guidelines

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

61. Air pollution standards by IFC/WHO 1999, is presented in the Table 11 below.

Table 11: 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

62. Georgian Standards for noise level is presented in the Table 12 below.

Table 12: Georgian Standards for Noise Levels

Purpose/use of area and premises	Allowable limits (A-Weighted Decibels (dBA))		
	L_{day}		23:00 – 08:00 L_{night}, Night
	08:00 - 19:00, Day	Evening 19:00-23:00	
Educational facilities and library halls	35	35	35
Medical facilities/chambers of medical institutions	40	40	40
Living quarters and dormitories	35	30	30
Hospital chambers	35	30	30
Hotel/motel rooms	40	35	35
Trading halls and reception facilities	55	55	55
Restaurant, bar, cafe halls	50	50	50
Theatre/concert halls and sacred premises	30	30	30
Sport halls and pools	55	55	55
Small offices (≤100m^3) – working rooms and premises without office equipment	40	40	40
Small offices (≤100m^3) – working rooms and premises without office equipment	40	40	40
Conference halls /meeting rooms	35	35	35
Areas bordering with houses residential, medical establishments, social service, and children's facilities (>6 story buildings)	55	50	45
The areas bordering with hotels, trade, service, sport, and public organizations	60	55	50

Note: in case noise generated by indoor or outdoor sources is impulse or tonal, the limit must be 5dBA less thanindicated in the Table.

63. Table 13 shows the threshold values of the major air pollutants as defined by the GEO, IFC and EU legislation.

Table 13: Ambient Air Quality Standards

Parameter	Averaging Period	Limit (µg/m^3)		
		Maximum Permissible Concentration (MPC) in Georgia	IFC Guideline Value	EU Ambient Air Quality Guidelines
Nitrogen Dioxide (NO_2)	30 minutes	200	-	-
	1 Hour	-	200	200
	24 Hours	40	-	-
	1 Year	-	40	40
Sulphur Dioxide (SO_2)	10 minutes	-	500	-
	30 minutes	500	-	-
	1 Hour	-	-	350
	24 Hours	50	20	125
Carbon Monoxide (CO)	30 minutes	5,000	-	-
	24 Hours	3,000	-	-
Total Suspended Particulates (TSP) / Dust	24 Hours	150	-	-
	30 minutes	500	-	-
PM10	1 year	40	20	40
	24 hours	50	50	50
PM2.5	1 year	25	10	25
	24 hours		25	-
Ozone	8-hour daily max.	120	100	120

64. The Georgian Standards for vibration are designed for human comfort. These are shown in Table 14 below. Note that no standards for building damage exist.

Table 14: Georgian vibration values

Average Geometric Frequencies of Octave Zones (Hz)	Allowable Values X0, Y0, Z0			
	Vibro-acceleration		Vibro-speed	
	m/sec^2	dB	m/sec 10^{-4}	dB
2	4.0	72	3.2	76
4	4.5	73	1.8	71
8	5.6	75	1.1	67
16	11.0	81	1.1	67
31.5	22.0	87	1.1	67
63	45.0	93	1.1	67

Note: It is allowable to exceed vibration normative values during daytime by 5 dB during daytime. In this table of incon-stant vibrations, a correction for the allowable level values is 10dB, while the absolute values are multiplied by 0.32. The allowable levels of vibration for hospitals and rest houses have to be reduced by 3dB.

65. During the reporting period, environmental instrumental measurements (such as noise levels, ambient air quality and vibration) were not conducted for the JVA-01 and GUD-02 sub-projects because no construction activities occurred under these sub-projects.

Environmental quality measurements of noise level, ambient air quality and vibration under POT-1/LOT-01 sub-project

66. Environmental quality measurements of noise level and ambient air quality under POT-1/LOT-01 sub-project was conducted by the LLC BBE Scientific Research Laboratory at the end of June 2024 and submitted in July 2024 (See Table 17 and Table 18 below and Annex A), therefore is reported in this SAEMR. The distance from the construction sites to the nearest residential houses was about 50 m.

67. The above mentioned monitoring was carried out at one location. Directly during the monitoring, the work process was actively underway, all equipment was in working condition. Therefore, the monitoring results represent a real, complete picture of the impact of the implemented activities on the environment.

Ambient Air Pollution, POT-1/LOT-01

68. During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NO2, SO2, and CO in the air was determined. Each instrument used was calibrated, cleaned and pre-tested for field work. The GPS coordinates of the monitoring points are presented in the table below.

Table 15: GPS coordinates of the monitoring points

Monitoring Point Reference	Type of Monitoring	E	N	Date
Lot №I Ecetas	Noise	41.669523	42.135553	25.06.24
Lot №I Ecetas	Air Quality	41.669523	42.135553	25.06.24

69. Results of the ambient air monitoring under POT-01/LOT-01 sub-project is presented in the table below.

70. During the monitoring process, all devices were included and the work process was running at full load.

Table 16: Dust Particles (µg/m3); Carbon Monoxide (CO); Nitrogen Oxides (NO2) and Sulfur Oxides (SO2) monitoring results (PPM)

Parameters	Minimum	Maximum	Average value of measurements
PM 10	0.016	0.085	0.047
PM 2.5	0.003	0.007	0.005
CO	1.6	2.3	2.0
NO2	0.075	0.089	0.082
SO2	0.80	0.91	0.86

71. According to the results of the air quality monitoring conducted on 25 June 2024, the quality of air pollution does not exceed the permissible norms.

Noise level, POT-1/LOT-01

72. Noise levels were measured at 1 location - under POT-01/LOT-01 sub-project. The purpose of noise level monitoring is to determine what impact the workflow has on residents.

73. Noise, Monitoring Results access road to the CAMP is presented in the Table below.

Table 17: Noise, Monitoring Results access road to the CAMP

Different Parameters of Noise Level	Result (dB)
LAF_{max}	81.7
LAF_{min}	73.9
LAF_{av}	77.8

74. According to data received in 25 June 2024, under **POT-01/LOT-01 sub-project** noise level of 81.7, 73,9 and 77.8 dBA exceeded the standards of the National

Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial) for a very short period of time. The nearest residential house was located approximately 50m from the construction site and therefore appropriate noise abatement measures were immediately taken, resulting in noise levels returning to normal levels of 70 dBA. Additional mitigation measures to reduce noise propagation in future are presented in the table 27 below. IFC/WHO and national standards for Noise are presented in the Tables 13 above. It should also be noted that measurements carried out at construction sites, were temporary and conducted during the daytime from 12:00 pm to 14:15 pm and no complaints were received from the local population about the noise during the reporting period.

Environmental quality measurements of noise level, ambient air quality and vibration under POT-1/LOT-02 sub-project

75. Environmental quality measurements of noise level and ambient air quality under POT-1/LOT-02 sub-project was conducted by the LLC BBE Scientific Research Laboratory on 25 June 2024 (See Annex A). The distance from the construction sites to the nearest residential houses was about 50 m.

76. The above mentioned monitoring was carried out at one location under the POT-01/LOT-02 sub-project. Directly during the monitoring, the work process was actively underway, all equipment was in working condition. Therefore, the monitoring results represent a real, complete picture of the impact of the implemented activities on the environment.

Ambient Air Pollution, POT-1/LOT-02

77. During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NO2, SO2, and CO in the air was determined. Each instrument used was calibrated, cleaned and pre-tested for field work.

78. Results of the ambient air monitoring under POT-01/LOT-02 sub-project is presented in the table below.

Table 18: Dust Particles (µg/m3); Carbon Monoxide (CO); Nitrogen Oxides (NO_2) and SulfurOxides (SO_2) monitoring results (PPM)

Parameters	Minimum	Maximum	Average value of measurements
PM 10	0.025	0.147	0.077
PM 2.5	0.005	0.019	0.013
CO	0.0	0.0	0.0
NO_2	0.124	0.148	0.134
SO_2	1.84	2.01	1.92

79. According to the results of the air quality monitoring conducted on 25 June 2024 the quality of air pollution does not exceed the permissible norms and therefore no additional actions are required.

Noise level, POT-01/LOT-02

80. Noise levels were measured at 1 location under POT-01/LOT-02 sub-project. The purpose of noise level monitoring is to determine what impact the workflow has on residents.

Table 19: Noise, Monitoring Results access road to the second camp

Different Parameters of NoiseLevel	Result (dB)
LAF_{max}	78.8
LAF_{min}	67.0
LAF_{av}	72.9

81. During the monitoring process, all devices were included and the work process was running at full load.

82. According to data received in 25 June 2024, under **POT-01/LOT-02 sub-project** noise level of 78.8 dBA exceeded the standards of the National Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial) for a very short period of time. The nearest residential house was located approximately 50m from the construction site and therefore appropriate noise abatement measures were immediately taken, resulting in noise levels returning to normal levels. IFC/WHO and national standards for Noise are presented in the Tables 13 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 13:00 pm to 15:15 pm and no complaints were received from the local population about the noise during the reporting period.

Environmental quality measurements of noise level, ambient air quality and vibration under POT-1/LOT-03 sub-project

83. Environmental quality measurements of noise level and ambient air quality under POT-1/LOT-03 sub-project was conducted by the LLC BBE Scientific Research Laboratory on 25 June 2024 (See Annex A). The distance from the construction sites to the nearest residential houses was about 150 m.

84. The above mentioned monitoring was carried out at one location under the POT-01/LOT-03 sub-project. Directly during the monitoring, the work process was actively underway, all equipment was in working condition. Therefore, the monitoring results represent a real, complete picture of the impact of the implemented activities on the environment.

Ambient Air pollution, POT-01/LOT-03

85. During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NO2, SO2, and CO in the air was determined. Each instrument used was calibrated, cleaned and pre-tested for field work.

Results of the ambient air monitoring under POT-01/LOT-03 sub-project is presented in the table below.

Table 20: Dust Particles (µg/m3); Carbon Monoxide (CO); Nitrogen Oxides (NO_2) and SulfurOxides (SO_2) monitoring results (PPM)

Parameters	Minimum	Maximum	Average value of measurements
PM 10	0.007	0.011	0.010

Parameters	Minimum	Maximum	Average value of measurements
PM 2.5	0.003	0.003	0.003
CO	0.0	0.0	0.0
NO_2	0.086	0.126	0.107
SO_2	0.56	0.64	0.60

86. According to the results of the air quality monitoring conducted on 25 June 2024 the quality of air pollution does not exceed the permissible norms and therefore no additional actions are required.

Noise level, POT-01/LOT-03

87. Noise levels were measured at 1 location under POT-01/LOT-02 sub-project. The purpose of noise level monitoring is to determine what impact the workflow has on residents.

Table 21: Noise, Monitoring Results access road to the second camp

Different Parameters of NoiseLevel	Result (dB)
LAF_{max}	83.1
LAF_{min}	72.8
LAF_{av}	77.95

88. During the monitoring process, all devices were included and the work process was running at full load.

89. According to data received in 25 June 2024, under **POT-01/LOT-03 sub-project** noise level of 83.0 dBA exceeded the standards of the National Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial) for a very short period of time. The nearest residential house was located approximately 45m from the construction site and therefore appropriate noise abatement measures were immediately taken, resulting in noise levels returning to normal levels. IFC/WHO and national standards for Noise are presented in the Tables 11 above. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 14:15 to 16:15 pm and no complaints were received from the local population about the noise during the reporting period.

Measurement devices unit and validity of calibration

Ambient Air Pollution

90. For air monitoring, BBE team used 4 different sensors of Aeroqual Series 500 (PM10/PM2.5, CO, NOx, SOx).

91. The Series 500 Portable Air Quality Monitor is a handheld portable monitor used to measure up to 30 pollutants using the unique sensor head format. Sensors are housed within an interchangeable cartridge (“head”) that attaches to the monitor base. The head can be removed and replaced in seconds, allowing users to measure as many gases as they wish. Sensor heads feature active fan sampling which ensures a representative sample is taken, increasing measurement accuracy.

92. A long-life lithium battery and in-field zero and span calibration make this an easy-to-use device. Monitor ID identifies the monitor uniquely and ensures that all data from it are tied to that monitor. Location ID can be used to tag measurements to a specific location – helpful when sampling at multiple sites over the course of a day or week.

Figure 1: Air Quality Measuring Instrument Aeroqual Series 500

Noise

93. The noise monitoring spot was chosen so it could fully show the impact of construction processes on the population. Noise was monitored for an hour. BBE team used REED instruments 9300 to determine the noise level.

94. The sound level meter consists of a calibrated microphone, electronic circuits, and a display. The microphone detects small air pressure variations associated with sound and converts them into electrical signals. The aforementioned signals are then processed using the instrument's electronic circuitry. The display shows the sound level in decibels.

95. The sound level meter acquires the sound pressure level at a particular location. A sound level meter is used for acoustic measurements. It is a hand-held instrument with a microphone.

Figure 2: Noise level is determined by the REED INSTRUMENTS 9300 model adapter

96. Vibration level is determined by the REED instruments SD-8205 model adapter.

97. Vibration analysis is a process that monitors vibration levels and investigates the patterns in vibration signals. It is commonly conducted both on the time waveforms of the vibration signal directly, as well as on the frequency spectrum, which is

obtained by applying Fourier Transform on the time waveform.

Figure 3: REED instruments SD-8205 model adapter

4.2 Trends

98. During the reporting period CCs were required to follow all mitigation measures identified in relevant IEE/EMP and SEMPs within the framework of the GUD-02 and JVA-01 and POT-01 sub-projects.

4.3 Summary of Monitoring Outcomes

99. According to the data received on 25 June 2024 under POT-01/LOT-01 and POT-01/LOT-02 sub-projects the noise level exceeds the standards of the National Regulations and World Health Organization (IFC/WHO) 1999, But compared to the previous reporting period, the situation has improved and noise level under POT-01/LOT-01 and LOT-02 only slightly exceeds the acceptable IFC and national standards. The following mitigation measures will be implemented by CC (please see Table 27 below):

- Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance;
- Noisy construction activities should be avoided during night time;
- All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions
- Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e. temples, hospitals, schools, houses)
- Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise

4.4 Waste Management

4.5.1 Current Period

100. Due At the construction sites of POT-01 sub-project, there are mainly produced household and hazardous waste. Mainly household waste is collected in municipal containers which are served by the local cleaning services of the local Municipalities.

101. Hazardous waste is removed from the area on the basis of agreements concluded by contractors with certified companies under POT-01 sub-project after the start of civil works.

102. There is need of routine cleaning of sites. Contractors are strongly requested to have

separate containers for household and hazardous waste with proper labeling at the construction site.

103. 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.

104. Waste generated under the POT-01 is sub-project during the reporting period until the end of December 2024 is presented in Table 22 below.

Table 22: Waste generated under the POT-01 sub-project until the end of December 2024

#	Domestic, hazardous Waste & Sewage	Estimated Volume	Storage Area	Licensed Company
1	Household waste	2.5m^3	WWTP construction sites,	Poti Municipality
2	Hydraulic and used oil	30 liter	Temporary waste storage area at the Workshop	Medical Technology LLC
July-December 2024				
1	Household waste	1.7m^3	WWTP construction sites,	Poti Municipality
2	Hydraulic and used oil	26liter	Temporary waste storage area at the	Medical Technology LLC

Waste was also generated under the JVA-01 sub-project which is presented in the Table below.

Table 23: Waste generated under the JVA-01 sub-project until the end of June 2024

#	Domestic, hazardous Waste & Sewage	Estimated Volume	Storage Area	Licensed Company
1	Household waste	0,5m^3	WWTP construction sites,	Zugdidi Municipality
3	Hydraulic and used oil	7liter	Temporary waste storage area at the	Medical Technology LLC

4.5.2 Cumulative Waste Generation

105. Cumulative waste generation under the GUD-02 sub-project throughout the entire project is provided outlined in the Table below. This waste mainly include household and hazardous waste. Contractors were strongly requested to have separate containers for household and hazardous waste with proper labeling at the construction site. Household waste was collected in municipal containers, which were served by the local cleaning service of the local Municipality.

106. Hazardous waste was removed from the area on the basis of agreements concluded by contractors with certified companies under GUD-02 sub-project after the start of civil works.

Table 24: Cumulative Waste generated under the GUD-02 sub-project by the end of December 2024

January-June 2023			
1	Household waste	1	m^3
2	Sewage water	0,5	m^3
3	Hydraulic and used oil	6	L
4	Printer tonner	0,5	Kg.
July-December 2022			
1	Household waste	3	m^3
2	Sewage water	1	m^3
3	Hydraulic and used oil	10	L
4	Printer tonner	1	Kg.
January-June 2022			
1	Household waste	1	m^3
2	Sewage water	0,5	m^3
3	Hydraulic and used oil	6	L
4	Printer tonner	0,5	Kg.
July-December 2021			
1	Household waste	3	m^3
2	Sewage water	2	m^3
3	Hydraulic and used oil	8	L

4	Printer tonner	1	Kg.
January-June 2021			
1	Household waste	1	m^3
2	Sewage water	2	m^3
3	Hydraulic and used oil	7	L
4	Printer tonner	1	Kg.
July-December 2020			
1	Household waste	1,5	m^3
2	Sewage water	3	m^3
3	Hydraulic and used oil	6	L
4	Printer tonner	2	Kg.
January-June 2020			
1	Household waste	O,5	m^3
2	Sewage water	1	m^3
3	Hydraulic and used oil	9	L
4	Printer tonner	1	Kg.
July-December 2019			
1	Household waste	1	m^3
2	Sewage water	3	m^3
3	Hydraulic and used oil	7	L
4	Printer tonner	1	Kg.
January-June 2019			
1	Household waste	0,5	m^3
2	Sewage water	1	m^3
3	Hydraulic and used oil	5	L
4	Printer tonner	1	Kg.
July-December 2023			
1	Household waste	0,5	m^3
2	Hydraulic and used oil	5	L

July-December 2024			
1	Household waste	0	m^3
2	Hydraulic and used oil	0	L
Total			
1	Household waste	13	m^3
2	Sewage water	14	m^3
3	Hydraulic and used oil	71	L
4	Printer tonner	9	Kg.

107. Cumulative waste generation under the JVA-01 sub-project from January 2022 to December 2024 is provided in the Table below.

Table 25: Cumulative Waste generated under the JVARI-01 sub-project

January-June 2023		
Household waste	2	m^3
Used tires	1	m^3
Hydraulic and used oil	6	L
Printer tonner	0,7	Kg.
July-December 2022		
Household waste	1,5	m^3
Sewage water	0,5	m^3
Hydraulic and used oil	5	L
Printer tonner	0,3	Kg.
January-June 2022		
Household waste	3	m^3
Sewage water	0,7	m^3
Hydraulic and used oil	3	m^3
Printer tonner	0,4	Kg.
July-December 2023		
Household waste	2	m^3

January-June 2023		
Hydraulic and used oil	7	m^3
July-December 2024		
Household waste	0	m^3
Hydraulic and used oil	0	m^3
Total January 2022 – December 2023		
Household waste	8,5	m^3
Sewage water	2,2	m^3
Hydraulic and used oil	22	L
Printer tonner	1,4	Kg.

4.5 Health and Safety

108. The EHS specialists, Mr. Vakhtang Burchuladze POT-01 was available on his respective sites and his responsibilities include: maintaining safety and protection against HS accidents; provide H&S training including daily toolbox training sessions at each work site; approve H&S Plans for specific work activities; conduct routine site inspections and issue internal stop notices, if necessary, for unsafe activities; maintain H&S statistics log books for near misses, as well as incidents; and provide H&S input to Contractor reports.

4.5.1 Community Health and Safety

109. No workers incidents have been reported during reporting period under POT-01 sub-projects during the reporting time.

4.6 Training and Public Awareness

110. Routine personnel on-job trainings and toolbox talks happen by the construction companies almost on daily basis under POT-01 sub-project. Environmental Specialist of SC Mr. Shalva Bosikashvili and Environmental Specialist of USIIP Ms. Kate Chomakhidze also provided verbal instructions and on-job training for Construction Company's Environmental and H&S officers on 16 September 2024. The above trainings were conducted to ensure that contractors understand their responsibilities in implementing the IEE/EMP and SEMP requirements. This training aims to mitigate environmental issues related to the construction activities, particularly concerning the operation of open trenches of sewerage network sections and work at heights in Pumping Stations.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review

111. SEMPs prepared by contractors, within the framework of ZUG-01, POT-01, POT-02 and JVA-01sub-projects during the current and previous reporting periods are presented in table 26 below.

Table 26: 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	[1]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
8.	POT-01/LOT-01, POT-01/LOT-02 and POT-01/LOT-03, Construction of Sewerage System in Poti	February 2023

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

[1] Initial SEMP for POT-02 sub-project was prepared in May 2018 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.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

114. During the reporting period, close monitoring, guidance and communication between the DEPP, IPMO, consultant supervision team and contractors were carried out, as suggested during the previous EMR, January-June 2023, to avoid non-compliances and improve the situation on construction sites within the GUD-02, POT-01 and JVARI-01 sub-projects.

6.2 Opportunities for Improvement

115. During the next reporting period the tracking of actions to address non-conformances will be improved by IPMO up to 100% out of current 96%.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

116. During the reporting period Day-to-day monitoring of construction sites under USIIP/T4/POT-01 sub-project was conducted by the ES of CC Mr. Vakhtang Burchuladze. Individual and joint on-site monitoring activities were conducted by Environmental Specialist of SC Mr. Shalva Bosikashvili and Environmental Specialist of UWSCG/IPMO Ms. Kate Chomakhidze as well under USIIP/T4 on a regular basis.

117. A total of 11 site visits have been conducted at different times during the July-December 2024 under USIIP/T4 - POT-01 sub-project and included the monitoring of compliance of construction activities of POT-01 sub-projects to the IEE/EMPs, SEMPs requirements.

118. Post Construction Environmental Audit was conducted by SC and UWSCG/IPMO during the December 2024 under GUD-02 sub-project.

119. During the above site visits under POT-01/LOT-01.LOT-02 and LOT-03 sub-project, 21 Environmental and HS non-compliances were identified. Contractor developed Corrective Action Plans within the identified deadlines and sent improved photos of sites to SC and USIIP.

120. A summary of the status of the monitoring visits, including dates of site visits, photographs, persons involved in site visits, etc., is shown in Table 7 above. During the reporting period, onsite training workshop and a meeting with representatives of the Contractors and the Supervision Consultant were held.

121. According to data received in et the end of June 2024, under POT-01/LOT-01 sub-project noise level of 81.7 dBA exceeded the standards of the National Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial). The nearest residential house was located approximately 50m from the construction site and therefore additional mitigation measures were required and are presented in the table 27 below.

122. According to data received in 25 June 2024, under POT-01/LOT-02 sub-project noise level of 78.8 dBA also exceeded the standards of the National Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial). The nearest residential house was located approximately 50m from the construction site and therefore additional mitigation measures were required and are presented in the table 27 below. All other parameters are within acceptable limits.

123. According to data received in 25 June 2024, under POT-01/LOT-03 sub-project noise level of 80 dBA also exceeded the standards of the National Regulations and World Health Organization (IFC/WHO), which is 70dBA (Industrial; commercial). The nearest residential house was located approximately 45m from the construction site and therefore additional mitigation measures were required and are presented in the table 27 below. All other parameters are within acceptable limits.

124. Environmental Monitoring Specialist of SC/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.

125. 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 Environmental Monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.

7.2 Recommendations

126. During the reporting period, July-December 2024, the USIIP/T4 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.

127. More detailed recommendations for the implementation of T4 during the next months until the end of July 2025 are provided in the Table 27 below:

Table 27: Recommendations to Address Environmental Issues under POT-01

Recommendations POT-01 sub-project	
Recommendations	**Implementation status and date**
POT-01/LOT-01/LOT-02/LOT-03	
Noise from the construction activities should not cause disruption and nuisance to nearby community, Especially when sensitive receptors - residential houses are located 50m-60m away from construction sites.	Instructions are given to contractor to improve the situation and to conduct following mitigation measures by the Mid of February 2025 Plan activities in consultation with SC and IPMO/UWSCG so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance Noisy construction activities will be avoided during night time All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions Impose speed limits on construction vehicles to minimize emissions along areas where sensitive receptors are located (i.e.

Recommendations POT-01 sub-project	
	temples, hospitals, schools, houses) Install noise barriers (e.g., panels, curtains, or partitions) to reduce the emission of engine noise Conduct meetings with population and provide information related to schedule of construction activities and noise caused by the project activities.
Walls of the deep trenches (>1.5m) should be strengthened by adequate and sufficient quantity of boards to avoid landfall of the soil and accidents (workers damage)	Will be completed by the end of end of January 2025

128. Post-Construction Environmental Audit report will be prepared under POT-01/LOT-01/LOT-02/LOT-03 sub-project in April 2025.

Annexes

ANNEX A: ENVIRONEMNTAL MONITORING DATA OF NOISE AND AMBIENT AIR QUALITY POT-01/LOT-01, 25 JUNE 2024

JSC BUILDING CONSTRUCTION AND TRADE FIRM ECRTAS GEORGIAN BRANCH-
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Physical Parameters Report -
October 2023

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JSC BUILDING CONSTRUCTION AND TRADE FIRM ECRTAS GEORGIAN BRANCH-
Physical Parameters Report – June 2024

1. General Information

Project number: #250624

Date of the monitoring: 25.06.24

Monitoring of physical parameters was carried out in June. The mentioned monitoring was carried out at one location.

Directly during the monitoring, the work process was actively underway, all equipment was in working condition. Therefore, the monitoring results represent a real, complete picture of the impact of the implemented activities on the environment.

During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NOx, SOx, and CO in the air was determined.

Each instrument used was calibrated, cleaned and pre-tested for field work.

Table 2.1 GPS coordinates of the monitoring points

#	Monitoring Point Reference	Type Of Monitoring	E	N	Date
1	Lot №1 Ecrtas	Noise	41.669523	42.139553	25.06.24
2	Lot №1 Ecrtas	Air Quality	41.669523	42.139553	25.06.24

2. Air Quality Monitoring

Ambient air monitoring is an integral part of an effective air quality management system. The purpose of air quality monitoring is to study if an area has an air pollution problem and how construction works affect the air quality, which can lead to negative impacts on the environment, working personnel and the local population in close proximity of the works. Monitoring helps in assessing the level of pollution in relation to the ambient air quality standards.

Table 2.1 Dust Particles, Carbon Monoxide (CO) Nitrogen Oxides (NOx) and Sulfur Oxides (SOx) Concentration Permissible Limits

Parameter	Time Interval	Maximum Permissible Concentration μg/m³	National limit for Human Rights of Health –MPC, μg/m³	IFC/WHO (updated 2016) –guideline value, μg/m³	EU Air Quality Standards. Permitted Exceedances Per Year μg/m³
PM 2.5	1 h	25		25	
	1 year	10	12-17	10	25 / n/a
PM 10	1 h	50		50	
	24 hrs	50	35-35		50 / 35
	1 year	20	20-28	20	40 / n/a
CO	8 hour mean	10	5-7		1000
NO_2	1 hour	200	35-140	200	200 / 18
	1 year	40	26-32	40	40 / n/a
SO_2	1 hour	350	350	500	350 / 3
	24 hrs	125	5	20	125 / 24
	1 year	500			

In order to evaluate dust particle concentration in the air, the team used Aeroqual Series 500, which includes PM10, PM2.5 sensors. The specific sensor is calibrated and tested for its accuracy and precision. CO concentration was also evaluated using Aeroqual series 500, with specific CO sensor, which is also calibrated and tested.

2.1 Air Monitoring Point -AAS #1

During the monitoring process, all devices were included and the work process was running at full load.

Figure 2.1 Air Quality Monitoring point (AAS- #1)

Table 2.1.1 #AAS-#1 Dust Particles (μg/m3), Carbon Monoxide (CO), Nitrogen Oxides (NOx) and Sulfur Oxides (SOx) monitoring results (PPM)

Parameter	Minimum	Maximum	Average value of measurements	Methods used
PM 10	[illegible]	[illegible]	[illegible]	Aeroqual [illegible] PM Sensor
PM 2.5	[illegible]	[illegible]	[illegible]	Aeroqual [illegible] PM Sensor
CO	[illegible]	[illegible]	[illegible]	Aeroqual [illegible] CO Sensor
NO_2	[illegible]	[illegible]	[illegible]	Aeroqual [illegible] NO_2 Sensor
SO_2	[illegible]	[illegible]	[illegible]	Aeroqual [illegible] SO_2 Sensor

2.2 Conclusion

[illegible]

3. Noise Level Monitoring

Optimal Limits of Noise Level. These limits are based on IFC guidelines

[illegible]

Recipient zone	Time Interval	The average permissible norm of noise (dB)	Maximum permissible norm of noise (dB)
Populated area	7:00-23:00	[illegible]	[illegible]
Populated area	23:00-7:00	[illegible]	[illegible]
Industrial, Commercial	Day-Night	[illegible]	[illegible]

3.1 Noise Level Monitoring point

During the monitoring process, all devices were included and the work process was running at full load.

Figure 3.1 Noise (NAS#1) Monitoring Point

Table 3.1.1 Noise (NAS#1) Monitoring Results

Different Parameter of Noise Level	Result (dB)
LAFmax	81.7
LAFmin	73.9
LAFeq	**77.8**

3.2 Conclusion

[illegible]

6. Annex 1 –Calibration Certificates

Annex I -Calibration Certificate


aeroqual


aeroqual


aeroqual


aeroqual

LLC BSE Scientific Research Laboratory

MBD Inssat Sanayi ve Ticaret Anonim Sirketi Branch

Physical Parameters Report – 2024

Georgia, Tbilisi, [illegible]
Tel: [illegible]
Email: [illegible]@gmail.com
Website: www.bsu.ge
Director: [illegible]

June 2024

Table of Contents

1. General Information

Project number: [illegible]

Date of the monitoring: 25.06.2024

[illegible]

[illegible] PM 10, PM 2.5, [illegible]

[illegible]

Table 1.1 [illegible] coordinates of the monitoring points

#	Monitoring Point/Reference	Type Of Monitoring	E	N	Date
1	[illegible]	Noise	[illegible]	[illegible]	[illegible]
2	[illegible]	Air Quality	[illegible]	[illegible]	[illegible]

2. Air Quality Monitoring

[illegible]

2.1 Air Monitoring Point –AAS#1

During the monitoring process, all devices were included and the work process was running at full load.

Figure 2.1 Air Quality Monitoring point (AAS–#1)

Table 2.1.1 #AAS #1 Dust Particles (µg/m3) Carbon Monoxide (CO) Nitrogen Oxides (NOx) and Sulfur Oxides (SOx) monitoring results [FFM]

Parameters	Minimum	Maximum	Average value of measurements	Methods used
PM 10	0.026	0.142	**0.077**	Aeroqual SERIES500 PM Sensor
PM 2.5	0.006	0.019	**0.013**	Aeroqual SERIES500 PM Sensor
CO	0.0	0.0	**0.0**	Aeroqual SERIES500 CO Sensor
NOx	0.124	0.148	**0.136**	Aeroqual SERIES900 NOx Sensor
SOx	1.84	2.01	**1.92**	Aeroqual SERIES900 SOx Sensor

2.2 Conclusion

According to the results of the air quality monitoring conducted on June 25th 2024, which was carried out with the Aeroqual 500 Series- monitor at the mentioned locations, according to the above-mentioned standards, the quality of air pollution does not exceed the permissible norms.

3. Noise Level Monitoring

Optimal Limits of Noise Level. These limits are based on IFC guidelines

Noise levels were measured at 1 location - NM # 1. The purpose of noise level monitoring is to determine what impact the workflow has on residents. Noise was measured using the IEED Environment 9300 (412 sound level).

Recipient zones	Time interval	The average permissible norms of noise (dB)	Maximum permissible norms of noise (dB)
Populated area	7:00- 23:00	55	70
Populated area	23:00- 7:00	45	60
Industrial, Commercial	Day-Night	70	70

3.1 Noise Level Monitoring point

During the monitoring process, all devices were included and the work process was running at full load.

Figure 3.1 Noise (NM#1) Monitoring Point

Table 3.1.1 Noise (NM#1) Monitoring Results

Different Parameters of NoiseLevel	Result (dB)
LAF_{max}	78.8
LAF_{min}	67.0
LAF_{eq}	**72.9**

3.2 Conclusion

During the noise level monitoring conducted on June 25th 2024, the exceeding of the allowed limit values was not observed at the mentioned location.

5. Measurement Reports

[illegible]
[illegible]
Georgia, Tbilisi, [illegible]
Block [illegible]
[illegible]
[illegible]

Report № 110724-[illegible]

Date of Report Delivery – 11.07.2024
Measurement type: Noise Level Measuring
Client Name: Ltd. "[illegible]", ID [illegible]
Sampling place: [illegible]
Sampling date: 25.06.2024
Measurement Done By: [illegible]

Different Parameters of Noise Level	Result (dB)
LAF_{max}	78.0
LAF_{min}	67.0
$LAeq$	**72.0**

Examiner: [illegible]

QC Lab Manager: [illegible]

Agreed: Director of Laboratory [illegible]

[illegible] Scientific Research Laboratory

Physical Parameters Report
2024

Customer – LTD "Saba"/ 205166568
Report Prepared For – LTD „China Nuclear 23 Construction"
404592789

Georgia, Tbilisi, [illegible] Avenue, Quarter II, Building N7
Tel: [illegible]
Email: [illegible]@gmail.com
Website: [illegible]
Director: [illegible]

June 2024

Table of Contents

1. General Information

Project number: [illegible]

Date of the monitoring: [illegible].06.2024

Monitoring of physical parameters was carried out in June. [illegible]

[illegible]

During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NO2, SO2 and CO in the air was determined.

Each instrument used was calibrated, cleaned and prepared for field work.

Table 2.1 GPS coordinates of the monitoring points

#	Monitoring Point Reference	Type Of Monitoring	E	N	Date
1	Lot [illegible] China nuclear 23 construction	Noise	[illegible]	[illegible]	[illegible]
2	Lot [illegible] China nuclear 23 construction	Air Quality	[illegible]	[illegible]	[illegible]

1. General Information

Project number: [illegible]

Date of the monitoring: [illegible]

Monitoring of physical parameters was carried out in April. The [illegible] monitoring was carried out at one location. Directly during the monitoring, the work process was actively underway, all equipment was in working condition.

Therefore, the monitoring results represent a real, complete picture of the impact of the implemented activities on the environment.

During the monitoring process, the air quality was measured according to the following parameters: the concentration of PM 10, PM 2.5, NO2, SO2 and CO in the air was determined.

Each instrument used was calibrated, cleaned and prepared for field work.

Table 2.1 GPS coordinates of the monitoring points

#	Monitoring Point Reference	Type Of Monitoring	E	N	Date
1	Lot [illegible] China nuclear 23 construction	Noise	[illegible]	[illegible]	[illegible]
2	Lot [illegible] China nuclear 23 construction	Air Quality	[illegible]	[illegible]	[illegible]

Physical Parameters Report
October, 2023

3. Air Quality Monitoring

Ambient air monitoring is an integral part of an effective air quality management system. The purpose of air quality monitoring is to study if an area has an air pollution problem and how construction works affect the air quality, which can lead to negative impacts on the environment, working personnel and the local population in close proximity of the works. Monitoring helps in assessing the level of pollution in relation to the ambient air quality standards.

Table 3.1.1 Dust Particles, Carbon Monoxide (CO), Nitrogen Oxides (NO2) and Sulfur Oxides (SO2) Concentration Permissible Limits

Parameter	Time Interval	Maximum Permissible Concentration µg/m³	National limit for Human Rights of Health – MPC, µg/m³	IFC/WHO (updated 2016) guideline value, µg/m³	EU Air Quality Standards, Permitted Exceedances Per Year µg/m³
PM2.5	1 hr	25		25	
	1 year	10	12-17	10	25 / n/a
PM10	1 hr	50		50	
	24 hrs	50	25-35		50 / 35
	1 year	20	20-28	20	40 / n/a
CO	8 hour mean	10	5-7		10.0
NO2	1 hour	200	85-100	200	200 / 18
	1 year	40	30-32	40	40 / n/a
SO2	1 hour	350	350	500	350 / 3
	24 hrs	125	5	20	125 / 24
	1 year	500			

In order to evaluate dust particle concentration in the air, the team used Aeroqual Series 500, which includes PM10, PM2.5 sensors. The specific sensor is calibrated and tested for its accuracy and precision. CO concentration was also evaluated using Aeroqual series 500, with specific CO sensor, which is also calibrated and tested.

Physical Parameters Report – June 2024

3.1 Air Monitoring Point -AAS #1

During the monitoring process, all devices were included and the work process was running in full load.

Figure 3.1 Air Quality Monitoring point (AAS- #1)

Table 3.1.1 #AAS-#1 Dust Particles (µg/m3), Carbon Monoxide (CO), Nitrogen Oxides (NO2) and Sulfur Oxides (SO2) monitoring results (PPM)

Parameters	Minimum	Maximum	Average value of measurements	Methods used
PM 10	0.007	0.011	**0.010**	Aeroqual [illegible] PM Sensor
PM2.5	0.002	0.003	**0.003**	Aeroqual [illegible] PM Sensor
CO	0.0	0.0	**0.0**	Aeroqual [illegible] CO Sensor
NO2	0.086	0.114	**0.107**	Aeroqual [illegible] NO2 Sensor
SO2	0.04	0.04	**0.04**	Aeroqual [illegible] SO2 Sensor

3.2 Conclusion

According to the results of the air quality monitoring conducted on June 25th 2024, which was carried out with the Aeroqual 500 Series analyzer at the mentioned locations, according to the above-mentioned standards, the quality of air pollution does not exceed the permissible norms.

LLC [illegible] Scientific Research Laboratory 4

Physical Parameters Report
January 2024

3.1 Air Monitoring Point -AAS #1

During the monitoring process, all devices were included and the work process was running in full load.

Figure 3.1 Air Quality Monitoring point (AAS- #1)

Table 3.1.1 [illegible]

Parameters	Minimum	Maximum	Average value of measurements	Methods used
PM 10	[illegible]	[illegible]	[illegible]	[illegible]
PM2.5	[illegible]	[illegible]	[illegible]	[illegible]
CO	[illegible]	[illegible]	[illegible]	[illegible]
NO2	[illegible]	[illegible]	[illegible]	[illegible]
SO2	[illegible]	[illegible]	[illegible]	[illegible]

3.2 Conclusion

[illegible]

Physical Parameters Report – June 2024

3. Noise Level Monitoring

Optimal Limits of Noise Level. These Limits are based on IFC guidelines

Receptor areas	Time interval	The average permissible value of noise (dB)	Maximum permissible noise level (dB)
Populated area	07:00-23:00	55	70
Populated area	23:00-07:00	45	60
Industrial, Commercial	Day-Night	70	70

Noise levels were measured at 1 location - (NM #1). [illegible]

3.1 Noise Level Monitoring point

During the monitoring process, all devices were included and the work process was running in full load.

Figure 3.1 Noise (NM#1) Monitoring Point

LLC [illegible] Scientific Research Laboratory 5

Physical Parameters Report – June 2024

Table 3.1.1 Noise (NM#1) Monitoring results

Different Parameters of NoiseLevel	Result (dB)
LAF_{max}	83.1
LAF_{min}	72.8
LAF_{eq}	**77.95**

3.2 Conclusion

During the noise level monitoring conducted on June 25th 2024, the exceeding of the allowed limit values was observed at the mentioned location.

LLC [illegible] Scientific Research Engineering Laboratory
Identification Number: [illegible]

+995 [illegible]
[illegible]@gmail.com
Georgia, Tbilisi, [illegible], Block III, Build 47
https://www.facebook.com/[illegible]
[illegible]

Report № 1110724-5

Date of Report Delivery – 11.07.2024
Measurement type: Air Quality Monitoring
Client Name: [illegible] "Geogili", ID [illegible]
Sampling place: City of Poti, Lot 3
Sampling date: 25.06.2024
Measurement Done By: [illegible]

Parameters	Minimum	Maximum	Average value of measurements	Methods used
PM 10	0.007	0.011	**0.010**	Aeroqual SERIES 500 PM Sensor
PM 2.5	0.001	0.003	**0.002**	Aeroqual SERIES 500 PM Sensor
CO	0.0	0.0	**0.0**	Aeroqual SERIES 500 CO Sensor
NO_2	0.086	0.126	**0.107**	Aeroqual SERIES 500 NO_2 Sensor
SO_2	0.56	0.64	**0.60**	Aeroqual SERIES 500 SO_2 Sensor

Examiner: [illegible]

QC Lab Manager: [illegible]

Agreed: Director of Laboratory [illegible]

LLC [illegible] Scientific Research Engineering Laboratory
Identification Number: [illegible]

+995 [illegible]
[illegible]@gmail.com
Georgia, Tbilisi, [illegible], Block III, Build 47
https://www.facebook.com/[illegible]
[illegible]

Report № 1110724-6

Date of Report Delivery – 11.07.2024
Measurement type: Noise Level Monitoring
Client Name: Ltd. "Geogili", ID [illegible]
Sampling place: City of Poti, Lot 3
Sampling date: 25.06.2024
Measurement Done By: [illegible]

Different Parameters of Noise Level	Result (dB)
LAF_{max}	83.1
LAF_{min}	71.8
LA_{eq}	**77.95**

Examiner: [illegible]

QC Lab Manager: [illegible]

Agreed: Director of Laboratory [illegible]

Physical Parameter Report
October, 2023

4. Annex 1 – Calibration Certificates








ANNEX B: PHOTOS OF POT-01/LOT-01/LOT-02/LOT-03, JVA-01, GUD-02 SUB-PROJECTS

Construction of Sewerage System in Poti – POT-01

Construction of Pumping Stations

PS 20 LOT-03

PS 19 LOT-03

PS 17 LOT-03

JVA-01 - Construction of Jvari Well Fields

POT-02 – Construction of Waste Water Treatment Plant in Poti

ANNEX C: NON-COMPLIANCE NOTICEs UNDER POT-01 SUB-PROJECT

NON-COMPLIANCE NOTICE, POT-01-LOT-01, 22 July 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

24th July 2023

TO: China Nuclear Industry
23 Construction CO., LTD

Attn. DU XIAODU
Project Manager

Our Ref.: POTI/01-LOT 3- 255/OUT -VH

Contract: USIIP/T4/CW/2022/L3/POT-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice - 22.07.23

Dear Sir,

Please find attached the Non Compliance Notice regarding Construction of Poti Sewerage System – LOT 03.

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

SAFEGE with Engineering Solutions LLC as sub-consultant ADB ADDRESS
SAFEGE Europe & Africa - Bulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 305 188 RPM Brussels Bank: KBC IBAN: BE 40 4731 0518 8171 BIC: KREDBEBB
SAFEGE Headquarters - 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

IQNet

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: CNI23	
Reference:	

This notice is to advice 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 LOT3

- Handmade unsafe ladder
- Concrete spills

Handmade unsafe ladder

Concrete spills

 	
All these conditions have to be remedied within 10 days by the prime Contractor **CNI23**	
Date of site visit: 22.07.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-01-LOT-01, 23 July 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

21th July 2024

TO: ECETAŞ A.Ş.
Attn Cenk TOKGOZ

Our Ref.: POTI 01-LOT 1- 113/OUT -VH

Contract: USIIP/T4/CW/2022/L1/POT-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice - 23.07.23

Dear Sir,

Please find attached Non Compliance Notice.

For the Engineer

Victor Hruska
Team Leader

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 736 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBEBB
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 - Fax: +33 1 47 24 72 02 – Web: www.safege.com
IQNet

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: ECETAS	
Reference:	

This notice is to advice 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 LOT1

- Power generator without drip tray

Power generator without drip tray

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

Date of site visit: 23.07.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-01-LOT-02, 24 July 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

24th July 2024

TO: MBD INSAAT

Attn. Mehmet Balsak

Contractor's Representative

Our Ref.: POTI 01-LOT 2- 135/OUT -VH

Contract: USIIP/T4/CW/2022/L2/POTI-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice- 24.07.24

Dear Sir,

Please find attached the Non-Compliance Notice regarding Construction of Poti Sewerage System – LOT 02.

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

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBE
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Île, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

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: MBD	
Reference:	

This notice is to advice 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 LOT2

- Deep pit without barrier and warning sign, unauthorized persons at the construction site
- Deep pit without barrier

Deep pit without barrier and warning sign, unauthorized persons at the construction site

Deep pit without barrier

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBE
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

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

Date of site visit: 24.07.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBE
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Île, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

NON-COMPLIANCE NOTICE, POT-01-LOT-01, 14 AUGUST 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

21st August 2024

TO: ECETAŞ A.Ş.
Attn. Cenk TOKGOZ

Our Ref.: POTI 01-LOT 1- 116/OUT -VH

Contract: USIIP/T4/CW/2022/L1/POT-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice – 14/08/2024

Dear Sir,

Please find attached Non-Compliance Notice.

For the Engineer

Victor Hruska
Team Leader

SAFEGE-with Engineering Solutions LLC as sub-consultant - ADD ADDRESS
SAFEGE Europe & Africa - Gulledelle 92, 1200 Brussels, BELGIUM - Tel: +32 2 739 46 90 - Fax: +32 2 742 28 91
VAT N° (BE) 0457 305 188 RPM Brussels Bank: KBC IBAN: BE 49 4731 0518 8171 BIC: KREDBEBB
SAFEGE Headquarters - 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 - Web: www.safege.com

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: ECETAS	
Reference:	

This notice is to advice 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 LOT1

- Open trench without barrier/warning tape, warning sign
- Worker without helmet in the trench
- Worker without helmet and person without PPE at the construction site

Open trench without barrier/warning tape, warning sign

Worker without helmet in the trench

Worker without helmet and person without PPE at the construction site

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

Date of site visit: 14.08.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-01-LOT-02, 15 AUGUST 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

21st August 2024

TO: MBD INSAAT

Attn. Mehmet Balsak

Contractor's Representative

Our Ref.: POTI 01-LOT 2- 138/OUT -VH

Contract: USIIP/T4/CW/2022/L2/POTI-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice- 15.08.2024

Dear Sir,

Please find attached the Non-Compliance Notice regarding Construction of Poti Sewerage System – LOT 02.

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

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBE
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Île, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

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: MBD	
Reference:	

This notice is to advice 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 LOT2

- Deep pit without barrier and warning sign
- Worker without helmet in the trench

Deep pit without barrier and warning sign

Worker without helmet in the trench

All these conditions have to be remedied within 10 days by the prime Contractor **MBD**	
Date of site visit: 15.08.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBE
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

NON-COMPLIANCE NOTICE, POT-01-LOT-03, 16 AUGUST 2024

SAFEGE
Ingénieurs Conseils
Engineering Solutions

21st August 2023

Attn. DU XIAODU
Project Manager

Our Ref.: POTI 01-LOT 3- 261/OUT -VH

Contract: USIIP/T4/CW/2022/L3/POT-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice - 16.08.2024

Dear Sir,

Please find attached the Non-Compliance Notice regarding Construction of Poti Sewerage System – LOT 03.

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

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBEBB
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Île, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

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: CNI23	
Reference:	

This notice is to advice 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 LOT3

- Deep pit without barrier and warning sign
- Rebar without capping

Deep pit without barrier and warning sign

Rebar without capping

All these conditions have to be remedied within 10 days by the prime Contractor **CNI23**	
Date of site visit: 16.08.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-01-LOT-03, 18 SEPTEMBER 2024

SAFEGE
Ingénieurs Conseils
EngineeringSolutions

20th September 2024

TO: China Nuclear Industry
23 Construction CO., LTD

Attn. DU XIAODU
Project Manager

Our Ref.: POTI 01-LOT 3- 269/OUT -VH

Contract: USIIP/T4/CW/2022/L3/POT-01

Subject: Construction of Poti Sewerage Systems – Non-Compliance Notice – 18/09/2024

Dear Sir,

Please find attached the Non-Compliance Notice regarding Construction of Poti Sewerage System – LOT 03.

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

For the Engineer

Victor Hruska
Team Leader

SAFEGE-with Engineering Solutions LLC as sub-consultant – ADD ADDRESS
SAFEGE Europe & Africa – Gulledelle 92, 1200 Brussels, BELGIUM – Tel: +32 2 739 46 90 – Fax: +32 2 742 38 91
VAT N° (BE) 0467 395 488 RPM Brussels – Bank: KBC – IBAN: BE 49 4731 0518 8171 – BIC: KREDBEBB
SAFEGE Headquarters – 15/27 rue du Port, Parc de l'Ile, 92000 Nanterre, FRANCE
Tel: +33 1 46 14 71 00 – Fax: +33 1 47 24 72 02 – Web: www.safege.com

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: CNI23	
Reference:	

This notice is to advice 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 LOT3

- Unacceptable housekeeping
- Generator without drip tray

Unacceptable housekeeping

Generator without drip tray 	
All these conditions have to be remedied within 10 days by the prime Contractor **CNI23**	
Date of site visit: 18.09.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

NON-COMPLIANCE NOTICE, POT-01-LOT-03, 22 OCTOBER 2024

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: CNI23	
Reference:	
This notice is to advice 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 LOT3

- **Unsafe wiring**
- **Unsafe ladder**
- **Worker without helmet**
- **Worker without PPE in the trench**

Unsafe wiring

Unsafe ladder

Worker without helmet

Worker without PPE in the trench

All these conditions have to be remedied within 10 days by the prime Contractor CNI23

Date of site visit: 22.10.2024	
Shalva Bosikashvili - Environmental specialist - "SAFEGE"	
Ketevan Chomakhidze - Environmental specialist "UWSCG"	

ANNEX D: POST CONSTRUCTION AUDIT REPORT UNDER GUD-02 SUB-PROJECT: CONSTRUCTION OF WASTE WATER SYSTEM IN GUDAURI

Post - Construction Environmental Audit Report

Loan No.: 3238-GEO

Project Number: 43405-025

Construction of Sewage Collection and Water Supply Systems in Gudauri Project Title: Urban Services Improvement Investment Program - Tranche 3 & 4

GUD-02 Sub-project

December 2024

ABBREVIATIONS

ADB	Asian Development Bank
CAP	Compensation Action Plan
DC	Design Consultant
EA	Executing Agency
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
ES	Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IEE	Initial Environmental Examination
MoEPA	Ministry of Environment Protection and Agriculture of Georgia
MFF	Multi-tranche Financing Facility
MoRDI	Ministry of Regional Development & Infrastructure
PCEAR	Post Construction Environmental Audit Report
SC	Supervision Consultant
USIIP	Urban Services Improvement Investment Program
UWSCG	United Water Supply Company of Georgia
WS	Water Supply

Contents

I. INTRODUCTION

1. This report represents the Post Construction Environmental Audit for Construction of Sewage Collection and Water Supply Systems in Gudauri (GUD-02) Sub-project under the Urban Services Improvement Investment Program - Tranche 4, Loan No.: 3238-GEO.

2. This Post Construction Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including safeguards requirement and aims to identify past and present concerns from the production and business activities of Project Company that related to impacts on environment. The specific objectives of the audit can be summarized as follows:

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

II. PROJECT DESCRIPTION

2.1 Brief Description of the Project

3. **GUD-02 Sub-project:** 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 November 2021. Contractor completed most of works and was prepared Partially Taking Over for Sewerage Network, Reservoir and Borehole N1. Construction works have not been completed fully by the new completion date, damages for Borehole N2 and N3 were still to be finalized and the final completion date was extended until the end of November 2024.

4. The major works to be implemented for rehabilitation and improvement of Gudauri sewage collection and water supply system, including construction of well fields (3), Raw Water Reservoir of 500m3, water pipes and sewage collection system.

5. The detailed design of the projected sewage network was carried out from the results of the detailed topographical survey of the entire project area. The drainage of the waste water had been designed by gravity, without need of pumping stations. The new layouts for the sewage pipelines avoided the international road and the main collectors did not cross the private plots.

6. The total length of the constructed sewerage network is 21 221m.

Table 1: Total Length of Sewerage Network

Pipe Diameter (mm)	Length (m)
200	20614
250	608
Total	**21 221**

7. The project design also considered the construction of a new pipeline for treated water that connect the WWTPs #1, #2, #3, #4 and the discharging point at the Aragvi river, bordering but outside the National Park. This conduction is 2725 m, with a difference in height between the initial and final points of approximately 380 m.

8. **USSIP:** It was proposed to improve the water supply and sanitation system in Gudauri under the Asian Development Bank (ADB) funded Urban Services Improvement Investment Program, which is under preparation stage. This Investment Program, implemented in secondary towns of Georgia, develops the water and sanitation services, which improves 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. All environmental impacts associated with the works are minor and can be managed through effective implementation of an environmental management plan. Since the subproject is unlikely to have significant adverse impacts, it is classified as

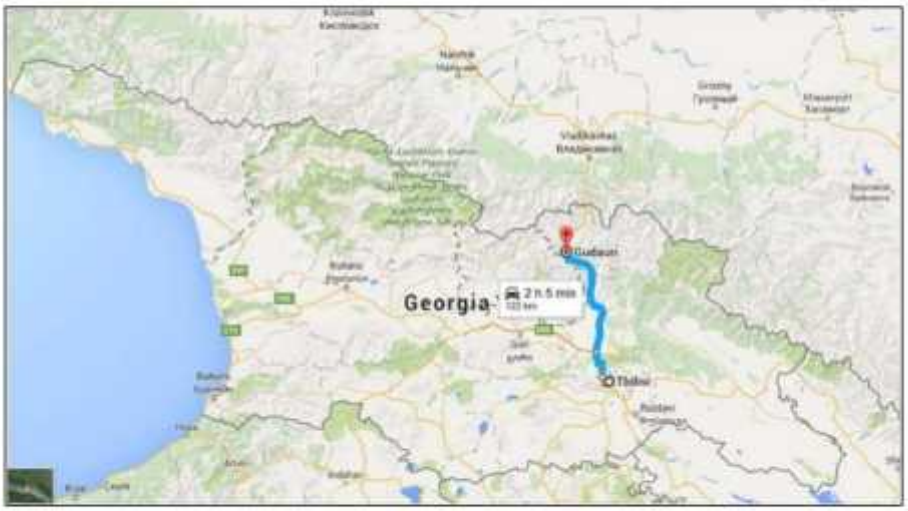
environment Category B, and accordingly an Initial Environmental Examination has been conducted.

9. The Investment Program improves water supply and sanitation (WSS) services in secondary towns of Georgia. The Investment Program includes (i) infrastructure improvement to rehabilitate, improve, and expand WSS services; (ii) institutional effectiveness to improve the service utility's technical and management capabilities of the key WSS service provider, "United Water Supply Company of Georgia" LLC to provide efficient WSS services, and develop the capacity of sector regulators to regulate tariffs, services standards, environmental protection, and drinking water quality in the long-term; and (iii) Investment Program implementation support.

10. The scope of work under the consultancy services is to (i) assess the technical, financial, economic, and environmental feasibility of subprojects; (ii) conduct surveys and investigations; (iii) develop hydraulic models; and (iv) prepare detailed designs, drawings, cost estimates, specifications, and bid documents for implementing water supply and sanitation schemes in the Investment Program financed by the MFF.

11. **Gudauri Location:** Gudauri is located 120 km from Tbilisi. Gudauri is one of the most important skiing resorts in Georgia at over 2 000 meters above sea level. Resort is very popular from foreign tourists and also, as it is quite near to Tbilisi – capital of Georgia, its popularity is increased every year.

Map1: Project Area on the Map of Georgia



12. The project was implemented according to the requirements of Georgian National and the

same as of Asian Development Bank's Environmental Legislative Framework (SPS 2009).

Figure 1: Gudauri Water Supply Improvement Subproject Map

13. **GRM:** For the effective implementation of GUD-03 sub-project under the USIIP, UWSCG issued special order (#122) on 30 April 2014, which was further replaced by Order # 196 (October 2018) on the "Establishment of GRM within the Framework of the Asian Development Bank Funded Projects" and signed by the head of UWSCG. Order #196 gives clear instructions to every involved stakeholder how to act when affected people are impacted by the project. On November, 2021 the amendment of the order #196 was developed by the order #431.

14. To promptly and effectively review and solve the complaint of the individual concerned, the Grievance Redress Commission (hereinafter the Commission) be established with the following composition:

- Director of United Water Supply Company of Georgia, Chairperson of the Commission;
- Deputy Director of United Water Supply Company of Georgia on Technical Issues, Member of the Commission;
- Deputy Director of United Water Supply Company of Georgia on Financial Issues, Member of the Commission;
- Deputy Director of United Water Supply Company of Georgia, Member of the Commission;
- Deputy Director of United Water Supply Company of Georgia, Member of the Commission;
- Deputy Director of United Water Supply Company of Georgia, Member of the Commission;
- Deputy Director of United Water Supply Company of Georgia, Member of the Commission;
- Head of Legal Department of United Water Supply Company of Georgia, Member of the Commission;
- Head of Environmental Protection and Permits Department of United Water Supply Company of Georgia, Member of the Commission;
- Head of Donor-Funded Projects Management Department of United Water Supply Company of Georgia, Member of the Commission;
- Head of State-Funded Projects Management and Supervision Department of United Water Supply Company of Georgia, Member of the Commission;
- Representative of Environmental Protection and Permits Department of United Water Supply Company of Georgia, the Commission Secretary".

15. No written and/or verbal complaints were received during the project implementation phase under GUD-02 subprojec.

2.2 Main Stakeholders of the Project

16. The main institutions that are involved in implementation of the EMP are: executing agency (EA) - United Water Supply Company of Georgia (UWSCG), Supervision Consultant (SC) - SAFEGE (France) with Engineering Solution LLC (Georgia) and to a lesser extent the Ministry of Environmental Protection and Agriculture (MoEPA). Investment Program Management Office (IPMO) within UWSCG, which is the Department of Management of Projects Financed by the Donor Organizations is responsible for the day-to-day management of the project including implementation of the EMP. Department has a Deputy Head, Mr. Nodar Rostomashvili. The IPMO has an Environmental Specialist Ms. Ketevan Chomakhidze who is responsible for management of the environmental aspects of USIIP, Tranches 3 and 4.

17. The SC includes a full time Environmental Specialist, Mr. Shalva Bosikashvili to assist the IPMO supervise and monitor implementation of the EMP during construction. Department of Permits, Environmental Protection and Social Affairs of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP.

18. Environmental issues arising from the construction activities were immediately brought to the attention of the construction supervision team to coordinate efforts in order to immediately mitigate impacts, protect the environment, and safeguard the health and welfare of the local communities. All these are to be conducted within the framework of the overall construction management and supervision.

19. Main organizations involved in the project and related to environmental safeguards are presented in the **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
		Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 577 44 09 90 nnadashvili@adb.org
		ADB RETA, Environmental Consultant	George Kobaladze Tel: +995 599 689834 E-mail gkobaladze.consultant@adb.org, me
Borrower	UWSCG	UWSCG, Department of Permits, Environmental Protection and Social Affairs, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Management of Projects Financed by Donor Organizations, Deputy Head	Mr. Nodar Rostomashvili Tel: +995 597 181111 E-mail: **n.rostomashvili@water.gov.ge**
Borrower	UWSCG/USIIP/T4	Environmental Specialist	Ms. Ketevan Chomakhidze Tel:+995

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
			577 380309 E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	SAFEGE (France) with Engineering Solution LLC (Georgia)	Environmental Specialist:	Mr. Shalva Bosikashvili Tel:+995 595116041 E-mail: sbosikashvili@yahoo.com
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

III. SUMMARY OF PREVIOUS ENVIRONMENTAL AUDITS

20. In 2019-2024, in the construction phase of Gudauri water supply system, the environmental monitoring was conducted by several organizations, namely - ADB, Supervision Consultant (CSC), Construction Contractor (CC) and UWSCG. A total of 78 non-compliances were identified in the environmental monitoring phase in 2019-2021 (see **Annex 1**).

21. The identified non-compliances can be divided into the following main areas: absence or improperly installed warning and prohibition signs - 18 (19.14%), improper management and disposal of waste or hazardous construction materials - 31(32.97%); violation of the requirements for wearing safety uniforms (PPE) or safety standards - 24(25,53%); Incorrect management of topsoil – 4 (4.25%); oil spills – 14 (14.89%); violation of IEE/SSEMP requirements in the phase of rehabilitation works - 3 (3,19%).

22. In 2019-2024, corrective actions were developed and realized for all of the above-listed non-compliances. According to semi-annual environmental reports (SAEMRs), all non-compliances have been eliminated.

IV. SUMMARY OF OBSERVATIONS OF SITE VISITS

4.1 Introduction

23. The reservoir, water supply system (pipeline), pump station and 3 water wells were constructed within the scope of the given Tranche 4.

4.2 Site Visit -- Audit results

21. Construction of Gudauri Water supply systems (GUD 02) financed from Tranches 4 of USIIP.

22. The Contractor had to construct new reservoir, welfield and pipeline network (Gudauri) to serve the projected population. Contract was signed with **China Nuclear Industry 23 Construction Co.** on 4 January 2019. Final completion date is November 2024.

23. The Post-construction Environmental Audit of Gudauri Water supply system was conducted by the environmental team of SC/SAFEGE on December 2024.

24. The audit team visited the following facilities: (i) The reservoir ; (ii) The PS , (iii)well field and (iv) water supply pipeline (Gudauri). For the locations of the mentioned facilities, see. Besides, the part of the access roads to the mentioned facilities are restored.

25. Reservoir and water wells were fenced and it was impossible for strangers as well as domestic animals to enter the site (see **Figure 2,3,4,5).**

Figures 2 and 3: Reservoir

Figures 4 and 5: Water Wells

26. The territories were restored in a timely manner; the removed topsoil was used for the rehabilitation works. The local roads of all objects are improved.

27. Soil piles with already planted grass was laid on the territory of the reservoir and PS. Small sections of the ground access roads to the facilities were also restored.

28. Both, the hazardous and household waste were totally disposed from the project zone. Besides, the construction techniques and construction materials were removed as well, and lighting poles were installed all over the area.

4.3 Non-compliances and Corrective Actions

29. During the final HSE audit no Non-compliances were identified.

V. CONCLUSIONS AND RECOMMENDATIONS

30. On December 2024, at the stage of the Post-Construction Environmental Audit within the scope of GUD-02 - " Construction of Sewage Collection and Water Supply Systems in Gudauri (GUD-02)" Sub-project conducted by Supervision Consultant/SAFEGE all non-compliances observations during the site visits were Improved, no additional study is required.

31. The construction of the Gudauri collector and water system (reservoir and well field and Gudauri water pipeline network) is complete and the object is put to exploitation. The reservoir, and water wells territories are fenced. The reservoir and wells have a gates and reservoir guardroom. The territories are cleaned and there is a drainage system provided around the territories of the reservoir water wells.

35. Table 3 summarizes details of the revealed non-compliances and observations.

Table 3: non-compliances and observation fixed during the Post-Construction Environmental Audit

#	Non-compliance/Observation	Required action and term	Responsible person	Progress of Corrective Actions
1	**Non-compliance 1**: Construction waste is uncontrollably dumped on the territory of the Gudauri Reservoir	Construction waste should be removed and disposed accordingly until the end of December 2024, Photo N1  Photo N2 	UWSCG	Improved, construction waste was removed from the territory and disposed accordingly, December 2024, Photo N1  Photo N1 
2	**Non-compliance 2**:	Fuels and lubricants spills		Improved, December 2024

	Oil Spill was identified on the project area of the Gudauri Reservoir	should be eliminated. The territory should be cleaned and reinstated and oil contamination should be removed until the end of December 2024 Photo N1 		
3	**Observation 1:** The area around the well fields inside the fence was contaminated with animal fecal matter	The area of the well fields must be cleaned promptly, the gate should be closed to prevent accidental entry of people and animals into the well field area until the end of December 2024, Photo N1 	UWSCG	Improved, December 2024 

36. Since all these non-compliances have been corrected, the environmental component of the project has to be considered closed.

4.2 Recommendations

37. There was no need to hire a contractor. UWSCG developed and implemented all corrective actions with its own personnel and will maintain the sites during the operation phase as well.

ANNEXES:

Annex 1: Non-compliances observed during the Environmental Audits conducted during the 2020-2023 reporting period

Date	Ref Number	Subject	Content/Issues
June- December 2020			
25 June		- Topsoil should be stripped before construction activity and stored separately (not mixed with subsoil). - Shoring in the trenches should be installed properly and inspected before usage, whether they are reliable.	
January - June 2021			
30 March		- Waste container without lid and label - Unacceptable housekeeping - Uncontrolled oily waste; oil spills	
June- December 2022			
10 November		- Unacceptable housekeeping (Boring Well 3) - Water pump and Generator without drip tray	
January- June 2023			
20 May		- Oil spill (Boring Well 3) - Concrete spills(Boring Well 3) - Unacceptable housekeeping (Camp) - Waste containers without lid and label (Camp) - Oil spills (Camp) - Concrete spills (Camp)	

Annex 2. Gudauri Water Supply Post-Construction Environmental Audit Checklist

Requiredmitigationmeasuresofenviromentalimpact	Measuresimplemented				Comment
	yes	partially	no	N/A	
Site territory (Gudauri Reservoir, 3 well fields)	x				All project zones were fenced.
Topsoil placed at original location		x			The rehabilitation works were carried out in all project zones, where the removed topsoil in the project zone was used.
Vegetation cover reinstated		x			The grass has been self-restored on the territory.
Trees replanted as needed				x	No trees were planted in the project zone.
Construction waste and surplus/waste soil removed completely and disposed properly	x				All the construction equipment and construction materials were removed from the project zones.
Hazardous waste removed and disposed properly.	x				No facts of uncontrolled disposal of hazardous waste were fixed in the project area.
Fuels and lubricants spills eliminated	x				No traces of leakage were identified in the project area.
Contractor equipment and machinery removed	X				All the construction equipment was removed from the project zones.
All temporary facilities removed and cleaned up	x				The temporary auxiliary buildings are fully removed from the site.
Streets with installed network reinstated to pre-construction or better conditions	x				The access roads to the project zone are reinstated. Their physical state is satisfactory.
Post-Construction territory reinstated to pre-construction or better conditions	x				The project zone is reinstated in line with the requirements.