Semi-Annual Environmental Monitoring Report

#14 Semiannual Report

(Reporting Period: July-December 2022)

Project Number: 43405-025

GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 3)

(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
DPPASA	Department of Permits, Environmental protection and Social Affairs
DDR	Due Diligence Report
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
ES/ SES	Environmental Specialist/ Senior Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IPMO	Investment Program Management Office
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
PMD	Projects Management Department
SAEMR	Semi-Annual Environmental Monitoring Report
SC	Supervision Consultant
USIIP	Urban Sector Improvement Investment Program
UWSCG	United Water Supply Company of Georgia
WS	Water Supply
WSS	Water Supply & Sewerage
WWTP	Waste Water Treatment Plant

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I. INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for "Urban Services Improvement Investment Program" (USIIP), Tranche 3 and describes the period of January-June 2022.

2. This report is the 14th Semi-annual EMR for the T3 of "Urban Services Improvement Investment Program".

1.2 Headline Information

3. During the reporting period, construction work was carried out only within the framework of the GUD-03 subproject. Under the above sub-project, the progress of civil works during the reporting period was very low. All civil works under other USIIP/T3 subprojects have already been completed. Please see paragraphs 8-19 below for more details about the USIIP/T3 sub-projects.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

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

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

6. **Tranche 3 of the Investment Program includes:**

- Construction of Water Supply and Wastewater Network in Ureki/Phase 3 (URE-01);
- Construction of Wastewater Treatment Plant in Ureki (URE-02);
- Construction and Rehabilitation of Water Supply System in Kutaisi/Phase 2 (KUT-01)
- Construction of New Transmission Pipeline in Abasha (ABA-01)
- Construction of Waste Water Treatment Plants in Gudauri (GUD-03)

The following projects are financed under Tranche 3:

7. [1]**Construction of Water Supply and Wastewater Network in Ureki/Phase 3 (URE-01).** The project comprises of the construction of 1 water supply pumping station and 31 sewage pumping stations (Shekvetili - 18, Ureki - 13; construction of new reservoirs (2,000 m^3 x 3,000 m^3 and 1 x 1,200 m^3); Distribution network - laying of approximately 70 km water supply pipelines (distribution network will be divided into 3 areas), laying of approximately 70 km sewage pipelines; installation of approximately 1,500 water meters; Wells - drilling of 10 drinking water wells.

8. The Contract was signed with JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan) on October 28, 2014. Commencement date was November 24, 2014. Initial Completion date was scheduled on November 22, 2018 but due to changes in the design of project, which include the construction of an Aqueduct across the Natanebi River, the construction of Gabion wall to protect well fields from flooding and erosion, and the construction of an additional deep well N8 along the banks of the Natanebi River Project completion date was further extended until September 2019. The project is foreseen to serve 35,000 tourists and 5,400 local inhabitants by year 2040.

[1] T1-T3 BAEMRs may have some overlap, due to the financing arrangements of Ure-01 project, which is simultaneously financed by T1,T2 and T3.

9. Supervision Consultant EPTISA conducted Post Construction Environmental Audit and prepared Post Construction Environmental Audit Report under URE-01 sub-project in June 2021.

10. **Construction of Wastewater Treatment Plant in Ureki (URE-02).** The project comprises of the construction of new Wastewater Treatment Plant with the capacity of 6,570 m³/day.

11. The contract URE-02 was signed on April 30, 2015 with JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH and Co.KG ProtechnoSrl (Germany) / Aritim (Turkey), the contract was completed on June 9, 2018.

12. The Post-construction Environmental Audit of the URE-02 sub-project was carried out by the Supervision Consultant EPTISA and the corresponding audit report was prepared in June 2019.

13. **Construction and Rehabilitation of Water Supply System in Kutaisi/Phase 2 (KUT-01).** The project envisages construction of Kvitiri 973 m³/h capacity and Mukhrani 660 m³/h capacity pumping stations; Reservoirs - construction of Near East and Mukhrani reservoirs with the capacity of 9,000 m³ (2x4,000+1,000). Distribution network - 332.1 km.

14. United Water Supply Company of Georgia signed a contract with SMK Ulusal Insaat Ve Ticaret A.S. (Turkey) for implementation of KUT-01 project on 22 April 2015. The initial date of completion of the contract was June 8 2018, the contract was completed in July 2020. SC/EPTISA conducted Post construction audit under KUT-01 sub-project in June 2021 and submit Post Construction Audit Report to UWSCG and ADB. Post Construction Audit Report under KUT-01 was prepared by SC/EPTISA in June 2021.

15. **Construction of New Transmission Line in Abasha (ABA-01).** Within the Aba-01 project the following major works were carried out: approximately 15 km long 500 mm diameter transmission pipeline was installed from headwork to the town of Abasha, chlorination building was constructed and the water meters were installed at the headwork.

16. The contract for implementation of ABA-01 was signed on October 13, 2017 with AS Inshaat–N, LLC (Azerbaijan). Project completion date was 14th of March 2020. Contractor issued the letter of claim (on 13 Mar 2020) for time extension on ABA-01 project up to 20 May 2020. The Engineer submitted its determination until 12th May, 2021 that was rejected by UWSCG.

17. The Contractor issued a new claim on 18th of June 2022 that hasn't been approved by the UWSCG as yet. The final extension day will be agreed during the next reporting period and presented in the next Semi-annual EMR, January-June 2023.

18. **Construction of Waste Water Treatment Plants in Gudauri (GUD-03).** The Proposed project envisages construction of 5 Waste Water Treatment Plants with different sizes but using the same technological process:

    - New Gudauri. The new development in the north of Gudauri (ab. 750 m^3/day) and Gudauri Heights (350 m^3/day).
    - Upper and Central Gudauri: Located at the same site that the old WWTP, near the church (estimated up to 2000 m^3/day).
    - Gudauri Downtown. In the head of the big plot of the plateau, down the downtown. (ab. 350 m^3/day).
    - Plateau-Lower Gudauri. At the end of the plateau for the new development (ab. 750 m^3/day).
    - Seturebi. One plant to treat the water in Seturebi village (ab. 350 m^3/day).

19. The Contract was signed on June 3, 2019 with "China Nuclear Industry 23 Construction Co." LTD (CNI23). The initial date of completion of the GUD-03 sub-project was April 2021. The

deadline for implementation of GUD-03 subproject was extended until November 2023.

2.2 Project Contracts and Management

20. The main institutions that are involved in implementation of the EMP are 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, Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environment Protection and Agriculture (MoEPA).

21. The Investment Program Management Office (IPMO) under UWSCG which was created in January 2011 and which is the Donors Funded Projects Management Department, is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist who is responsible for managing the environmental aspects of the USIIP. The head of the department is Ms.Irina Chikhladze.

22. The IPMO Environmental Specialist (Ms.Kate Chomakhidze) responsibilities in respect of implementation of the EMP are as follows:

(i) Approve the Site Specific Environmental Management Plan (SSEMP) before Contractor takes possession of construction site;
(ii) Monitor implementation of EMP and ensure the environmental safeguards compliance;
(iii) Review the updated IEE and/or SEMP and send it for clearance to ADB;
(iv) Ensure that contractors have access to the EMP and IEE report;
(v) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure;
(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

23. The SC include a full time Environmental Specialist to assist the IPMO oversee day-to-day implementation of EMPs by contractors, 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; 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.

24. The Contractor also appoints a full time Environmental specialist under GUD-03 sub-project Mr. Mr. Aleksandre (Sasha) Mchedlishvili to be a senior member of the construction management team based on site for the duration of the contract. Environmental Specialist of contractor is responsible for preparing the Specific Environmental Management Plan (SSEMP) 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; environmental accidents/incidents including resolution activities; non-compliance notifications issued by the SC; Corrective action plans issued to the SC in response to non-

compliance notices; 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.

25. Department of Environmental Protection and Permits, renamed in August 2022 to the Department of Permits, Environmental Protection and Social Affairs of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP. The Head of Department is Ms.Maka Goderdzishvili. DPPASA have “Permits” and “Environemntal Protection and Social Affairs” Divisions. Ms. Salome Mosidze is the head of Environmental Protection and Social Affairs Devision. More detailed description of implementation arrangements; responsibilities and staffing are provided in the **Table 1 below.**

Table 1: Institutionnel Arrangement, Responsabilités 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

26. A list of main organizations involved in the USIIP/T3 and relating to environmental safeguards is presented in Table 2 below.

Table 2: List of Main Organizations under USIIP/T3

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Lender	Asian Development Bank	Country Environmental Focal	Ninette R. Pajarillaga E-mail: npajarillaga@adb.org
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili +995 595 070442 nnadashvili@adb.org
		ADB RETA Environmental Consultant	George Kobaladze +995 599 689834 gkobaladze.consultant@adb.org
Borrower	UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO Department of Projects Management, Head	Ms. Irine Chikhladze Tel: +995 598 179898 E-mail: i.chikhladze@water.gov.ge
Borrower	UWSCG/USIIP/T3	Environmental Specialist	Ms. Ketevan Chomakhidze Tel: +995 577 380309

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
			E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	A Consortium of Consulting Firm led by Eptisa Servicios de Ingeniria S.L. (Spain) in association with SAFEGE (Belgium) and JSC Georgian Water Project (Georgia)	Environmental Specialist:	Mr. Irakli Legashvili Tel: +995 577 177016 E-mail: chem_ira@yahoo.com
Contractor URE-02	JV of Ludwig Pfeiffer Hoch-und Tiefbau GmbH and Co.KG ProtechnoSrl (Germany) / Aritim (Turkey)	Environmental H&S Specialist	Mr.Nikoloz Meparidze Tel: +995 599 346821 E-mail: niko@telenet.ge
Contractor URE-01	JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Levan Asabashvili Tel: +995 599 962 693 Email: levani.asabashvili@mail.ru
Contractor KUT-01	SMK Ulusal Insaat Ve Ticaret A.S. (Turkey)	Environmental Specialist	Ms. Natia Babukhadia E-mail: natiiibab@gmail.com Tel: +995 595 150444
		H&S Specialist	Mr. Beso Balanchivadze E-mail: besobal84@gmail.com Tel: +574 188 653

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Contractor ABA-01	. AS Inshaat–N, LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Nodar Usupishvili E-mail n.usupashvili@gmail.com Tel: +995 577 68 16 71
Contractor GUD-03	. "China Nuclear Industry 23 Construction Co." LTD (CNI23)	Environmental H&S Specialist	Mr. Aleksandre (Sasha) Mchedlishvili E-mail alexandermchedlishvili1@gmail.com Tel: +995 574 02 77 33

2.3 Project Activities during Current Reporting Period

27. During the reporting period, construction work was carried out only under sub-project GUD-03 and therefore only this project is reflected in this SAEMR, while within the ABA-01 subproject, only restoration work was carried out inside the building of the Abashisi service center. All civil works under other USIIP/T3 sub-projects have already been completed. For more detailed information, please see para 8-19 above. Contractor under GUD-03 sub-projects have intensified all activities to improve the progress of the works on sites.

2.3.1 Project Activities during the Reporting Period

28. Construction progress under GUD-03 sub-project is presented in the Table 3 below.

Table 3: Progress of Construction Works, July-December 2022, GUD-03

GUD-03	Total	Progress during the reporting period (January-June 2022)	Progress during the reporting period (July-December 2022)
Plant and Mandatory Spare Parts Supplied from Abroad	21.70%	32.00%	37.00%
Design	5.06%	89.00%	89.00%
Installation and other Services	73.25%	49.00%	63.00%
Totals:	**100.00%**	**48.00%**	**58.00%**

2.4 Description of Any Changes to Project Design

29. During the reporting period January-June 2022, there were no changes to the agreed project design under USIIP / T3.

2.5 Description of Any Changes to Agreed Construction methods

30. During the reporting period January-June 2022, there were no changes to the agreed construction methods under USIIP / T3.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

31. A total of 6 site visits have been conducted during the reporting period under GUD-03 sub- and ABA-01 sub-projects, due to the fact that only minimal physical works were carried out within the proposed both sub-projects during the July-December 2022.

32. During the reporting period monitoring activities were carried out on July 5, August 3, August 26, November 1 and 10 and 15 under GUD-03 and and ABA-01 sub-projects. A summary of the status of monitoring visits, including dates of site visits, photographs, persons involved in site visits, nonconformities identified during site visits, etc., are shown in Table 4 below. 3 non-compliances were identified during the site visit on July 5, 2022; 18 non-compliances as of August 3, 2022; 28 non-compliances during the August 26, 2022 site visits, 42 non-compliances during the November 1 site visits, and 4 non-compliances during the November 10 site visits.

33. During the reporting period Monitoring activities were conducted by the Environmental Monitoring Specialist of contractor under GUD-03 sub-project Mr. Mr.Aleksandre (Sasha) Mchedlishvili on the daily basis to verify compliance with environmental and EH&S requirements in accordance with IEE/EMP and developed the monthly monitoring reports and submitted to SC/Eptisa.

34. Environmental Monitoring Specialist of Eptisa, Mr.Irakli Legashvili conducted monthly monitoring of project sites under USIIP/T3/GUD-03 and developed Non-compliance Notices (please see Table 4 below). During the reporting period two 4 NCNs have been developed under GUD-03 sub-project (please see Annex C to the report). ES of EPTISA also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.

35. USIIP Environmental Specialist Ms. Kate Chomakhidze monitored the work of contractors under the USIIP/T3 subprojects 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.

3.2 Site Inspections/Audits

36. Inspection and monitoring of construction sites under GUD-03 sub-project were conducted by ESs of USIIP and Eptisa. The schedule of Joint inspection carried out under GUD-03 sub-project is provided in the Table 4 below.

Table 4. Summary of Site Inspections/audits

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
Continuously during reporting period (July-December 2022)	AS Inshaat–N, LLC (Azerbaijan)	Mr. Irakli legashvili, Environmental Specialist of SC	Regular monitoring of construction sites Compliance with Environmental and HES requirements	Environmental, Health and Safety issues on construction sites Regular cleaning of the construction site All photo-documentations are presented in Annex B and Annex C of this report.	Weekly Monitoring Checklists	Completed
ABA-01 15 November 2022		ADB's Environmental Safeguard Mission headed by Ms. Nino Nadashvili, Associate Safeguards Officer Georgia Resident Mission Asian Development Bank Ms. Kate Chomakhidze	Quarterly Environemntal Safeguard Mission	Adequate fencing of the Abasha service center is required, after the completion of the construction works Appropriate information banners must be installed at the entrance gates of the Service Center.	Verbal instruction was given to CC and SC to improve the situation	Not yet Completed, will be completed in the first Q1 of 2023 and reported in the next SAEMR, July-December 2023

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
		UWSCG/USIIP/Environmental consultants				
Continuously during reporting period (July-December 2022)	GUD-03 "China Nuclear Industry 23 Construction Co." LTD (CNI23) Contract Number: UWSCG-ICB-GUD-03	Mr. Aleksandre (Sasha) Mchedlishvili Environmental Specialist of contractor	Day to day monitoring of sites Compliance with Environmental and HES requirements	Environmental, Health and Safety issues on construction sites Regular cleaning of the construction site All photo-documentations are presented in Annex B and Annex C of this report.	Weekly Monitoring Checklists	Completed
5 July 2022		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili	Regular monitoring of sites	Construction sites should be properly fenced from all sides and equipped with lockable gate Deep excavation zones should be fenced by red grid and proper warning signs "Deep Excavation Zone" should be installed Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing	Verbal Instruction were given to contractor to immediately improve the situation Non-Compliance Notice issued (Please see Annex C)	Completed, end of July 2022 Completed, end of July 2022 Completed, end of July 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
3 August 2022		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili Environmental Specialist, USIIP, Ms.Kate Chomakhidze	Monthly monitoring of construction sites	**WWTP 2** Construction waste materials should be fully removed from construction area and disposed according agreement, please see Photo N1 below  Trees at the construction site should be fenced (freed from the surplus soil, waste and materials) and protected, please see Photo N2 below	Verbal Instruction were given to contractor to immediately improve the situation Non-Compliance Notice issued on 4 August 2022 (Please see Annex C) Photo-materials are presented in (Annex B) Corrective Action Plan was prepared by contractor, whithin the proposed deadlines, please see	Completed September 2022 Completed in August 2022, please see Photo N1 below

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated, please see Photo N3 below 	Annex D to this report.	 Completed in August 2022, please see Photo N2 below 

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Storage of construction materials should be better organized		Completed in August 2022
				Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site		Completed in August 2022
				Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing		Completed in August 2022
				Waste should be placed only at the proper waste container and discharged timely, please see Photo N4 below		Completed in August 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Workers always should use complete PPE. Safety norms during construction works should be respected Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants **WWTP 4**		Completed in August 2022, please see Photo N3 below  Completed in August 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Construction sites should be properly fenced from all sides		Completed in August 2022
				Construction waste materials should be fully removed from construction area and disposed according agreement, please see Photo N5 below 		Completed in August 2022
				Workers always should use complete PPE. Also special equipment during high altitude works should be always used to avoid accidents (workers damage)		Completed in August 2022
				Hazardous Waste container with should		Completed in August 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				be installed at the proper organized place with concrete floor and roofing Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing Household Waste container should be signed Waste should be placed only at the proper waste container and discharged timely		Completed in August 2022, plese see Photo N4 below  Completed in August 2022 Completed in August 2022, please see Photo N5 below

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
						 Completed in August 2022
				Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants, please see Photo N6 below 		
26 August 2022		Environmental monitoring specialists of SC/EPTISA	Monthly monitoring of construction sites	**WWTP 1** Household Waste container should be signed	Verbal Instruction were given to contractor to	Completed, September 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
		Mr.Irakli Legashvili Environmental Specialist, USIIP, Ms.Kate Chomakhidze		"Household Waste", please see Photo N1  Top soil should be stored stored properly, better managed (height of fill must not exceed 2 m and the inclination of the fill slope must not exceed 45^{o}), fenced by tape and signed, please see Photo N2  Construction waste should be removed from site	immediately improve the situation Non-Compliance Notice issued on 29 August 2022 (Please see Annex C) Photo-materials are presented in (Annex B) Corrective Action Plan was prepared by contractor, whithin the proposed deadlines, please see Annex D to this report.	Completed, end of September 2022, please see Photo N1 below 

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				completely and disposed according agreement Construction materials should be stored/segregated properly, please see Photo N3  Workers always should use complete PPE. Safety norms during construction works should be respected Excesses of excavation soil should be removed according the agreement **WWTP 2** Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage, please see Photo N4		Completed, September 2022 Completed, September 2022 Completed, September 2022 Completed, September 2022 Completed, September 2022, Please see Photo N2 below

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Construction waste materials should be fully removed from construction area and disposed according agreement, please see Photo N5  Trees at the construction site should be fenced (freed from the surplus soil, waste and materials) and		 Completed, September 2022 Completed, September 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				protected, please see Photo N6  Excesses of excavation soil should be removed according the agreement At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants		Completed, September 2022 Completed, September 2022 Completed, September 2022 Completed, September 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing and signed "Hazardous Waste" Household Waste container should be signed "Household Waste" Waste should be placed only at the proper waste container and discharged timely, please see Photo N7		Completed, September 2022 Not Completed, despite numerous verbal instructions, as well as the issuance of NCN, signs on the waste conteiners are only in Chinees, will be completed in January 2023 and reflected in the next SAEMR, January-June 2023. Completed, end of June 2022, please see Photo N3

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Storage of construction materials should be better organized Workers always should use complete PPE. Safety norms during construction works should be respected **WWTP 4** Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers		 Completed June 2022 Completed, end of June 2022 Completed, end of June 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				falling and damage, please see Photo N8  Construction waste materials should be fully removed from construction area and disposed according agreement Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing and signed “Hazardous Waste” Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site		Completed, September 2022 Completed, end of September 2022 Completed, end of September 2022, please see Photo N3 below

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
						 Completed, end of June 2022, please see Photo N4 below  Completed , September 2022 Completed, September 2022
				Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing, please see Photo N9  At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated Electric Generator should be placed at the concrete		

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				surface to avoid soil contamination by fuel or lubricants, please see Photo N10  Proper Household Waste container should be installed and signed “Household Waste” Waste should be placed only at the proper waste container and discharged timely, please see Photo N11		Completed, September 2022, please see Photo N5 below  Completed at the Mid. of September 2022 Completed, end of June 2022, Please see Photo N6 

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Workers always should use complete PPE		Completed September 2022
1 November 2022		Environmental monitoring specialists of SC/EPTISA Mr.Irakli Legashvili Environmental Specialist, USIIP, Ms.Kate Chomakhidze	Monthly monitoring of construction sites	**WWTP 1** Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage, please see Photo N1	Verbal Instruction were given to contractor to immediately improve the situation Non-Compliance Notice issued on 3 November 2022 (Please see Annex C)	Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Construction waste materials and surplus soil should be fully removed from construction area and disposed according agreement Construction materials should be better stored/segregated, fenced and labelled, please see Photo N1	Photo-materials are presented in (Annex B) Corrective Action Plan was prepared by contractor, whithin the proposed deadlines, please see Annex D to this report.	Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 At the construction territory are presented spill spots of fuel/lubricant. These contaminated places should be remediated Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site, please see Photo N1		Completed in November 2022 Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing Waste should be placed only at the proper waste container and discharged timely, please see Photo N4 		Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Workers always should use complete PPE Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants Construction territory should be regularly cleaned **WWTP 2** Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage, please see Photo N5		Completed in November 2022 Completed in November 2022 Completed in November 2022 Completed in November 2022, please see Photo N8 

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Construction materials should be better stored/segregated, fenced and labeled Construction waste materials should be fully removed from construction area and disposed according agreement Excesses of excavation soil should be removed according the agreement Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be		Completed in November 2022 Completed in November 2022 Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				provided at the construction site Containers with hazardous substance should be stored at the proper organized place with concrete floor and roofing During using electrical equipment safety norms should be respect (electric cables should be protected), please see Photo N6  Hazardous Waste container with should be installed at		Completed in November 2022 Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				the proper organized place with concrete floor and roofing		Completed in November 2022
				Waste should be placed only at the proper waste container		Completed in November 2022
				Scrap metal materials should be placed at the dedicated place, fenced and labeled		Completed in November 2022
				Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants		Completed in November 2022
				Construction territory should be regularly cleaned		Completed in November 2022
				Workers always should use complete PPE		
				WWTP 3		Completed in November 2022
				Construction sites should be properly fenced from all sides and equipped with lockable gate		Completed in November 2022
				Safety norms during construction works should be respect. Safe walkways		

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				with handrail on open trenches and wells should be used to avoid workers falling and damage		Completed in November 2022
				Construction waste materials and excesses of excavation soil should be fully removed from construction area and disposed according agreement		Completed in November 2022
				Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site		Completed in November 2022
				Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing		Completed in November 2022
				For waste should be used only standard containers and signed		Completed in November 2022
				Waste should be placed only at the proper waste container		Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Construction territory should be regularly cleaned Workers always should use complete PPE. **WWTP 4** Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage Construction sites should be properly fenced from all sides Construction waste materials and surplus soil should be fully removed from construction area and disposed according agreement, please see Photo N7		Completed in November 2022 Completed in November 2022 Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				 Waste containers should be signed, please see Photo N8  Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing		Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Waste should be placed only at the proper waste container and discharged timely Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing Workers always should use complete PPE Construction territory should be regularly cleaned, please see Photo N9		Completed in November 2022 Completed in November 2022 Completed in November 2022 Completed in November 2022 Completed in November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
						
10 Novemeber 2022		ADB's Environmental Safeguard Mission headed by Ms. Nino Nadashvili, Associate Safeguards Officer Georgia Resident Mission Asian Development Bank Ms. Kate Chomakhidze	Quarterly environmental Safeguard Mission	WWTP N4 Top soil should be stored stored properly, and fenced by tape and signed appropriately, please see Photo N1 below	Verbal Instruction were given to contractor to immediately improve the situation	Not completed, please see table 28 - Recommendations to Address Environmental Issues under USIIP/T3/GUD-03 sub-project below, will be completed by the end of January 2023 and reflected in the next SAEMR, January-June 2023.

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
		UWSCG/USIIP/Environmental consultants		 Waste containers should be appropriately labeled in a language understandable to workers, Please see Photo N2 below 		Completed by the end of November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
				Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage, please see Photo N3 below  Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants, please see Photo N4 below		Not yet Completed, Since the construction works are temporarly terminated, please see table 28 - Recommendations to Address Environmental Issues under USIIP/T3/GUD-03 sub-project below, will be completed by the end of January 2023 and reflected in the next SAEMR, January-June 2023 Completed, end of November 2022

Date of visit	Name of Company Name of Contract	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report	Implementation progress
						

3.3 Issues Tracking (Based on Non-Conformance Notices)

37. During the reporting period, July-December 2022, up to 95 non-compliances were identified by ESs of SC and USIIP compared to 51 non-compliances identified during the previouse reporting period Janaury-June 2022 under the GUD-03 subproject, as it included the work of four different construction sites (WWTPs No.1, No.2, No.3 and No.4) within one sub-project. Some of the above inconsistencies were repeated during various site visits such as topsoil removal and storage and workers Safety regulations during construction work, in particular safe walkways on open trenches to avoid workers falling and being injured in open trenches and wells. As a result, during the period from July to December 2022, the contractor eliminated 98% of these discrepancies compared to 96% of these discrepancies in January-June 2022.

38. The contractors were always informed on the detected non-conformances and were demanded to improve on the deadline set and send photos of improvements made together with the corrective action plans. Environmental team of EPTISA and UWSCG/USIIP monitored the improvements during the next monitoring visits. All Non-conformance Notices issued during the reporting period is presented in ANNEX C to this Semi-Annual EMR.

39. A summary of the identified environmental issues under GUD-03 sub-project for July-December 2022 is presented below. There are two open issues under GUD-03 sub-project: top soil should be stored properly, and fenced by tape and signed appropriately; Household Waste container should be signed “Household Waste” in a language understandable to workers, including local workers.

Table 5: Summary Table GUD-03

Total Number of Issues for Project	95
Issues Opened This Reporting Period	2
Issues Closed This Reporting Period	93
Percentage Closed	98%

40. There are two open issues under ABA-01 sub-project: adequate fencing of the Abasha service center, after the completion of the construction works and appropriate information banners to be installed at the entrance gates of the Abasha Service Center.

Table 6: Summary Table ABA-01

Total Number of Issues for Project	2
Issues Opened This Reporting Period	2
Issues Closed This Reporting Period	0
Percentage Closed	0%

41. As it is presented in paragraphs 40 and 41 above, two issues are still opened under GUD-03 sub-project and two issues under ABA-01 sub-project, which will be improved during the January-June 2023 and improved photos of sites will be presented in the next Semi-annual EMR.

3.4 Trends

42. Information from the previous semi-annual EMR (January-June 2022) was used to identify trends in environmental protection issues. A summary of issues outstanding during the current reporting period is presented in paragraph 38 and table 5 above. The percentage of issues still open under the GUD-03 sub-project during the reporting periods is presented in table 7 below. As can be seen from Table 6, despite the fact that the total number of non-compliances have been increased from 51% to 95%, including all 4 WWTP construction sites under GUD-03 sub-project, the number of still open issues has decreased from 4% to 2%. The deadline for improving the situation is given in table 28 of this report and which is end of January 2023. The results of these improvements will be presented in the next SAEMR of the reporting period – January-June 2023.

Table 7: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
January-June 2022	51	96%	4%
July-December 2022	95	98%	2%

43. All major Non-Conformances under USIIP/T3 during the reporting period are provided in an Annex C of this report. All EH&S issues, 2% of which is still opened under GUD-03 sub-project are presented in para 40 and 41 above.

44. Recommendations to address environmental issues under GUD-03 sub-project is presented in table 18 below. Deadlines for improvement is indicated January 2023. All improvements will be implemented within the Q1 of 2023 and relevant photo-documentation will be presented in the next SAEMR, January-June 2023.

3.5 Unanticipated Environmental Impacts or Risks

45. There were no Unanticipated Envrionemntal Impacts During the reporting period,July-December 2022 under USIIP/T3.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1. Overview of Monitoring Conducted during Current Period

46. During the reporting period Environmental Quality Measurements of the Noise level and ambient air Quality were carried out by the contractor only under GUD-03 sub-project, since no construction activities were carried out under other sub-projets withn the framework of USIIP/T3.

47. Noise and air pollution standards defined by IFC/WHO 1999, are presented in the Table 7 and 8 below.

48. Gaorgian Standards for Noise, Vibration and Air Pollution is preneted in the tables 8 below.

Table 8: Noise Level Guidelines

Noise	dB National Regulations		dB 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

49. Air pollution standards by IFC/WHO 1999, are presented in the Table 9 below.

Table 9: Air pollution Guidelines

Contaminants	IFC/WHO Guideline Value (Limit) mg/m^3))
1	2
Inorganic dust	(*IFC does not have a standard for "inorganic dust". Instead IFC applies standards for PM2.5 and PM10). PM10 – 0,02/1 Year 0,05/24 Hour PM2,5-0,01/1 Year 0,025/24 Hour
Carbonic monoxide	n/a
Nitrogen dioxide (NO_2)	0,2/ 1 Hour

Contaminants	IFC/WHO Guideline Value (Limit) mg/m^3))
1	2
	0,04/1 Year
Aldehyde	n/a

50. Georgian Standards for noise level is presented in the table 10 below.

Table 10: 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 establish-ments, 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.

51. Table 11 shows the threshold values of the major air pollutants as defined by the GEO, IFC and EU legislation.

Table 11: 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
	10 minutes	-	500	-

Parameter	Averaging Period	Limit (µg/m^3)		
		Maximum Permissible Concentration (MPC) in Georgia	IFC Guideline Value	EU Ambient Air Quality Guidelines
Sulphur Dioxide (SO_2)	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

52. The Georgian Standards for vibration are designed for human comfort. These are shown in 12. Note that no standards for building damage exist.

Table 12: 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.

53. During the reporting period Environmental Quality Measurements of noise level and ambient air quality under GUD-03 sub-project was conducted by Ltd "NASETO GROUP" on 22 September 2022 (12:10 pm – 15:15 pm) and on 21 November 2022 (11:10 am – 16:45 pm) (Please see Annex A). Accoring to the measurements data on 22 September 2022 the measured noise levels at WWTP #2 and WWTP #4 were 78,2 dBA and 72,4dBA respectively and exceeded the daytime standard values of 55 dBA established by the National Regulations and World Health Organization (IFC/WHO)1999 (please see table 8 above). It should be noted also that WWTP#2 does not have sources of noise pollution and there is no vehicle movement at all, therefore the reason for noise emissions were caused by construction equipment and vehicles, which should be well maintained and regularly inspected. As for WWTP#4 it is located in direct proximity to the Mtskheta-Stephantsminda-Lars highway where car traffic is very high and which can be an additional source of noise propagation. It should be noted also that measurements carried out at construction sites, were temporary and conducted during the daytime from 11:00 am to 17:00 pm and no complaints were received from the local population about the noise during the reporting period. The distance from the construction sites to the nearest residential houses (for all four

WWTPs) is more about 400 m. The next monitoring measurements will be conducted in Q1-2023 and results will be reflected in the next Semi-annual EMR, January-June 2023.

54. Data of Environmental air quality measurements carried out on 22 September 2022 under GUD-03 are provided in the Table 12 below.

Table 12: Environmental Quality Measurements of Nitrogen and Sulfur Dioxide, Carbon Monoxide and Total Hydrocarbo under GUD-03
(22.09.2022 – 12[10] - 15[15])

# 1	Measurement Point		Measurement Results mg/m3			
			Nitrogen Dioxide	Sulfur dioxide	Carbon monoxide	Total Hydrocarbo
2	Location	Coordinates				
3	WWTP N1	0457927 4707023	0.009	<0.01	0.66	<0.1
4	WWTP N2	0457037 4701059	0.018	<0.01	0.39	<0.1
5	Gudauri WWTP #3	0457747 4700115	0.004	<0.01	0.46	<0.1
6	Gudauri WWTP #4	0457826 4699476	0.009	<0.01	0.83	<0.1

55. Environmental quality measurements of Dust air pollution, noise and vibration measurements under GUD-03 are provided in the Table 13 below.

Table 13: Environmental Quality Measurements, Dust Air Pollution, Noise and Vibration under GUD-03 (22.09.2022 – 12[10] - 15[15])

#	Measurement point		Measurement results							
			Noise Amax dBA	Vibro speed		Vibro acceleration		dust mg/ m3		
				mm/s	db	2 m/s2	db	pm2.5	pm10	total
2	Location	Coordinates								
3	WWTP N1	0457927 4707023	54.7	<0.1	<66	<0.1	<100	0.025	0.030	0.048
4	WWTP N2	0457037 4701059	78.2	<0.1	<66	<0.1	<100	0.024	0.028	0.037
5	Gudauri WWTP #3	0457747 4700115	44.1	<0.1	<66	<0.1	<100	0.026	0.031	0.043
6	Gudauri WWTP #4	0457826 4699476	72.4	0.1	66	0.1	100	0.010	0.012	0.018

56. Data of Environmental quality measurements of Nitrogen and Sulfur Dioxide, Carbon Monoxide and Total Hydrocarbo carried out on 21 November 2022 under GUD-03 are provided in the Table 14 below.

Table 14: Environmental Quality Measurements of Nitrogen and Sulfur Dioxide, Carbon Monoxide and Total Hydrocarbo under GUD-03 (21.11.2022 – 11[10] – 16[45])

# 1	Measurement Point		Measurement Results mg/m3			
			Nitrogen Dioxide	Sulfur dioxide	Carbon monoxide	Total Hydrocarbo
2	Location	Coordinates				
3	WWTP N1	0457927 4707023	0.007	<0.01	0.19	<0.1
4	WWTP N1 Nearest population	0458013 4701757	0.006	<0.01	0.21	<0.1
5	WWTP N2	0457037 4701059	0.004	<0.01	0.28	<0.1
5	WWTP N2 Nearest population	0457031 4701328	0.007	<0.01	0.21	<0.1
6	Gudauri WWTP #3	0457716 4700258	0.004	<0.01	0.18	<0.1
7	WWTP N3 Nearest population	0457031 4701328	0.005	<0.01	0.19	<0.1

# 1	Measurement Point		Measurement Results mg/m3			
			Nitrogen Dioxide	Sulfur dioxide	Carbon monoxide	Total Hydrocarbo
8	Gudauri WWTP #4	0457826 4699476	0.011	<0.01	0.31	<0.1
9	WWTP N4 Nearest population	0457862 4699385	0.005	<0.01	0.23	<0.1

57. Environmental quality measurements of Dust air pollution, noise and vibration carried out on 21 November 2022 under GUD-03 are provided in the Table 15 below.

Table 15: Environmental Quality Measurements, Dust Air Pollution, Noise and Vibration under GUD-03 (21.11.2022 – 11^{10} – 16^{45})

#	Measurement point		Measurement results							
			Noise Amax dBA	Vibro speed		Vibro acceleration		dust mg/ m3		
				mm/s	db	2 m/s2	db	pm2.5	pm10	total
2	Location	Coordinates								
3	WWTP N1	0457927 4707023	55.7	<0.1	<66	<0.1	<100	0.016	0.021	0.029
4	WWTP N1 Nearest population	0458013 4701757	53.8	<0.1	<66	<0.1	<100	0.013	0.017	0.025

#	Measurement point		Measurement results							
			Noise Amax dBA	Vibro speed		Vibro acceleration		dust mg/ m3		
				mm/s	db	2 m/s2	db	pm2.5	pm10	total
5	WWTP N2	0457037 4701059	54.9	<0.1	<66	<0.1	<100	0.019	0.024	0.032
6	WWTP N2 Nearest population	0457031 4701328	50.1	<0.1	<66	<0.1	<100	0.017	0.023	0.028
7	Gudauri WWTP #3	0457747 4700115	42.8	<0.1	<66	<0.1	<100	0.011	0.016	0.019
8	WWTP N3 Nearest population	0457031 4701328	43.7	<0.1	<66	<0.1	<100	0.015	0.022	0.029
9	Gudauri WWTP #4	0457826 4699476	69.8	0.1	<66	0.1	100	0.031	0.042	0.056
10	WWTP N4 Nearest population	0457862 4699385	59.7	0.1	<66	0.1	100	0.022	0.036	0.041

List of measurement devices unit and validity of calibration

58. During the environmental quality measurement the following measurement devices were used: **Noise** – Mini Sound level meter N05CC; **Vibration** – Smart Sensor – AR63B Vibration

meter; **Dust** – Portable Dust Deteqtor model LB-HD08 and Gasella Mikro Dust Pro (Self-calibration zero and optical filter). For nitrogen dioxide and carbon monoxide – Elan CO/NO_2; Total hydrocarbon MiniRae 7600, sulfure dioxide – WASP-XM-E-SO2.

4.2 Trends

59. In the current reporting period, the Environemntal Quality Measurements of the Ambient air pollution and noise propagation under GUD-03 sub-projects were carried out twice, instead of one as it was during the previouse monitoring period, as the results of monitoring showed the noise level in some places, for example, WWTP#4 exceed the reqired national and international standards as it was observed during the previouse reporting period as well, therefore additional mitigating measures are required, which are presented in the Table 18 of this report.

60. All other measuremnts of Dust, vibration and air pollution incluidng Nitrogen and Sulfur Dioxide, Carbon Monoxide and Total Hydrocarbo are within the national and IFC permissible levels and concentrations and in the result of implementation of relevant mitigation measures noise level will not exceed the permissible standards as well.

Environmental Quality Measurements of Nitrogen and Sulfur Dioxide, Carbon Monoxide and Total Hydrocarbo

4.3 Summary of Monitoring Outcomes

61. As it was mentioned above, according to data received in June 2022 under GUD-03 sub-project noise level under WWTP #4 exceeds the standards of the National Regulations and World Health Organization (IFC/WHO),1999 and therefore additional mitigation measures which are presented in the Table 18 below are required.

4.4 Material Resources Utilisation

4.4.1 Current Period

GUD-03

62. The contractor had provide information on the material resources utilization under the GUD-03 sub-project. The amount of the electricity and water used by the CC/“China Nuclear Industry 23 construction co.” during the reporting period under GUD-03 sub-project is provided in the table below.

Table 16: Material Resources Utilization under GUD-03 Sub-project, January-June 2022

N	Utilized Resources	Monthly	Measurement
1	Consumption of Water	62	M3
2	Electricity	20501	kwt
3	Fuel	1500	L

4.4.2 Cumulative Resource Utilisation

63. No commulative resources utilization was provided by contractor despite of numerouse verbal request and instructions. This information, will be reflected in the next SAEMR, January-June 2023.

4.5 Waste Management (GUD-03)

4.5.1 Current Period

64. At the construction sites under GUD-03 sub-project, there are mainly produced household, construction (inert, surplus soil) and hazardous waste. Mainly household waste is collected in municipal containers which are served by the local cleaning service. Contractors always have separate containers for household and hazardous waste with proper labeling at the construction site.

65. The construction waste that is allocated at the construction site is removed for its disposal that is managed by formal agreement with local municipality. All relevant agreement are provided in ANNEX E to this report.

Table 17: Amount of Waste Generated under GUD-03 Sub-project, January-June 2022

N	Waste management		Measurement
3	Municipal Waste	40	M^3

66. During the reporting period, CNI23 kept the Site and other areas used by it in a neat and clean condition, and free from any accumulation of waste and rubbish. CNI23 disposed all rubbish and waste materials of any nature occurring at the Site, and established regular intervals of collection and disposal of such materials and waste. CNI23 also kept its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. All municipal waste was disposed to an approved disposal site by Gudauri Municipality.

GUD 03

67. Household waste is collected at the construction sites in the Household Waste containers and transmitted to Municipal waste containers and finally disposed at the Kazbegi landfill.

68. Construction/demolition waste are also disposed according to the agreement with Solid Waste Management Company at the Kazbegi landfill, please see relevant agreement in ANNEX G to this report.

69. Hazardous waste is collected at the construction territories in the Hazardous Waste containers and according agreement transmitted to Medical Technology Company for final disposal. HSE specialists of the construction companies is responsible for the waste management under GUD-03 sub-project. On-job environmental safeguards training have been also conducted which included topics of waste management as well, please see relevant agreement in ANNEX G to this report.

4.5.2 Cumulative Waste Generation

70. No commulative Waste generation was provided by contractor despite of numerouse verbal request and instructions. This information, will be reflected in the next SAEMR, January-June 2023.

4.6 Health and Safety

4.6.1 Community Health and Safety

71. No community incidents have been reported under GUD-03 sub-project during the reporting period.

4.6.2 Worker Safety and Health

GUD-03

72. Environmental H&S Manager of GUD-03 sub-project Mr. Aleksandre (Sasha) Mchedlishvili Performed every day monitoring, induction and supervision of ongoing works according to HSE standards and by requirements of ADB/UWSCG/EPTISA and kept H&S incidents/accidents/Near Misses log book.

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

- PPE;
- Working on height;
- Top soil stripping and storage;

74. Near Missis (two) within the framework of the GUD-03 sub-project included
    - work at height without protective equipment
    - Workers without PPE.

75. Non-compliance notice have been issued by SC/Eptisa and contractor improved the situation within the propose deadline. All near missis were improved by the contractor during the reporting period and no further actions are required.

4.7 Training

76. Routine personnel trainings and toolbox talks happen by the construction companies almost on daily basis under GUD-03 sub-projects. Environemntal Specialist of SC Mr. Irakli legashvili and Environmental Specialist of USIIP Ms. Kate Chomakhidze also provided verbal instructions and training for Construction Company's Environmental and H&S officers on a regular basis in accordance with the relevant Terms of Referencis. The above trainings were conducted to ensure that contractors understand their responsibilities for the implementation

of the IEE/EMP, and to mitigate environmental issues associated with their construction activities.

5. FUNCTIONING OF THE SEMP

5.1. SEMP Review

77. The following SSEMPs were prepared by contractor, within the framework of URE-01, URE-02, KUT-01, ABA-01 and GUD-03 projects during the previous reporting periods:

GUD-03

- Location Specific EMP for Construction of Gudauri WWTPs (September 2019).

URE-01:

- SSEMPs for Ureki Well Fields (May 2016)
- Reservoir#1 (November 2016)
- Water Supply Pumping Station (November 2016)
- Reservoir #2 (Laituri Reservoir) (August 2018);

URE-02:

- SSEMP for Ureki Waste Water Treatment Plant (November 2015)

KUT-01

- SSEMP for Godogani Reservoir (August 2016)
- SSEMP Mukhnari Reservoirs (March 2016)
- SSEMP Aqueduct River Crossing (December 2019)
- SSEMP Partskanakanebi Chlorine Station (January 2020)

ABA-01

- SSEMP for Abasha Service Center (February 2020)

78. All SSEMPs under GUD-03, KUT-01, URE-01, URE-02 and ABA-01 projects were prepared by Contractor, endorsed by SC and approved by UWSCG and reviewed/commented by the RETA International Environmental Consultant of ADB under RETA 8663 - Ms. Keti Dgebuadze.

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

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1. Good Practice

80. During the reporting period there were close interactions between IPMO, consultant supervision team and contractors to improve the tracking of actions to address non-conformances under GUD-03 sub-project. As a result Construction waste materials and surplus soil were removed from construction area and disposed according agreement; Construction materials were better stored/segregated; At the construction territory spill spots of fuel/lubricantwere remediated Fuel and lubricants containers were installed at the proper organized place with concrete floor and roofing; Hazardous Waste container were installed at the proper organized place with concrete floor and roofing, Workers always use complete PPE, Electric Generator were placed at the concrete surface to avoid soil contamination by fuel or lubricants and the Construction territory was regularly cleaned.

6.2. Opportunities for Improvement

81. During the reporting period, IPMO improved tracking of corrective actions. Close monitoring, guidance and communication between PIU, SC and CC has been improved to avoid inconsistencies and improve the current situation. Further opportunities for improvement will include proper storage of topsoil under the GUD-03/WWTP #4 and management in accordance with the required national regulations.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

82. During the reporting period, July-December 2022, 6 site visits were carried out by SC and UWSCG/USIIP environmental specialists under GUD-03 sub-project and up to 95 non-compliances were revealed during these site visits compared to 51 non-compliances identified during site visits in previouse reporting period Janaury-June 2022. It should be noted also that during the reporting period the contractor eliminated 98% of these discrepancies.

83. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under GUD-03 sub-projects.

84. 4 Non-Conformance Notices have been issued to the contractor by the environmental specialist of SC and USIIP under GUD-03 sub-project. Corrective Action Plans have been implemented by CC in order to reduce environmental impacts of the project.

85. In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor conducted quarterly parametric measurements and observations of air quality, noise and vibration. More detaled information is provided in the chapter 4 – Results of the Environmental Monitoring above.

7.2 Recommendations

86. During the reporting period, July-December 2022, the T3 of Investment Program was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.

87. More detailed recommendations/next steps for the implementation of T3 during the next reporting period January-June 2023 are provided in the Table 18 below:

Table 18: Recommendations to Address Environmental Issues under GUD-03 Sub-project during the January-June 2023

Recommendations GUD-03 sub-project	
GUD-03	
(i) Top soil should be stored stored properly, and fenced by tape and signed	Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the end of January 2023
(ii) Household Waste container should be signed “Household Waste” in a language understandable to workers, including local workers	
Noise from the construction activities should not cause disruption and nuisance to nearby community and	Instruction are given to contractor to improve the

Recommendations GUD-03 sub-project	
other sensitive receptors (i.e. school, hospitals).	situation and to conduct following mitigation measures by the end of January 2023 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. 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. Relevant information and documentations will be reflected in the next EMR, January-June 2023

Recommendations GUD-03 sub-project	
ABA-01	
Adequate fencing of the Abasha service center, after the completion of the construction works	Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the Q1 of 2023
Appropriate information banners to be installed at the entrance gates of the Abasha Service Center	

88. Conduct monitoring of Noise and Ambient Air quality under GUD-03 project near the sensitive receptors of Construction sites in March and June 2023.

Table 19: The Specific Plan for Environmental Measurement under GUD-03 Project during the January-June 2023

Parameters	Quarterly measurement
Dust	March, June 2023
$PM_{2.5}$	March, June 2023
$PM1_0$	March, June 2023
Vibration	March, June 2023
Carbon monoxide	March, June 2023
Nitrogen dioxide	March, June 2023
Sulfur dioxide	March, June 2023
Noise	March, June 2023

ANNEXES

ANNEX A: ENVIRONMENTAL QIALITY MEASUREMENTS (NOISE LEVEL, AIR POLUTTION) UNDER GUD-03 SUB-PROJECT

China Nuclear Industry 23 Construction Co., Ltd
Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
The Contractor
Address：#5 Java street, 0180 Tbilisi, Georgia
Telephone：+995 571246556

Eptisa Servicios de Ingenieria,S.L.
Mr. Manuel Villafranca, Team Leader
David Gamrekeli Street 2
"Axis" Business Center, 4th floor
Tbilisi Georgia

[your reference/date]	[our reference/date]	[your contact]	[e-mail]
	GUD03-CNI23-ENG-22053 2022-10-2	Luo Ke	cni23georgiaofficial@gmail.com

Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
Subject: Environmental Parametric Measurement Report

Dear Mr. Joseph,

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

Yours sincerely
Contractor of the Construction of Wastewater Treatment Plants in Gudauri

Mr. Luo Ke
Project Manager

Appendix: Environmental Parametric Measurement Report 9 page.
Copy to: Contractor Internal

Page 1 of 1

Design and Construction of Waste Water Treatment Plant in Guduari (UWSCG-ICB-GUD-03-2018).
Date of Commencement August 1 2019 Term of Work Completion December 2022

1. Introduction

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

The present tender comprises the Detailed Design and the Construction of five Wastewater Treatment Plants in Gudauri town.

2. Location of the project areas

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

3. Regulatory Requirements

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

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

1. Decree No 38/N of February 24, 2003 of the Minister of Labor, Health and Social Affairs of Georgia, SSM III, №16, 06.03.2002, Article 150

2. Decree No.251/N of the Minister of Labor, Health and Social Affairs of Georgia of September15, 2006– SSMIII, №129, 20.09.2006, Article 1716

3. Decree No.351/N of the Minister of Labor, Health and Social Affairs of Georgia of December 17, 2007– SSMIII, №179, 18.12.2007, Article 1974

4. Decree No.304/N of the Minister of Labor, Health and Social Affairs of Georgia of September 18, 2009– SSMIII, №115, 22.09.2009, Article 1312

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

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

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

3. Description of the work to be performed.

In accordance with the agreement concluded between the Construction Contractor and Naseto Group LLC, environmental quality analysis was carried out at various points in Gudauri.
Construction work has not yet been carried out, so all the measurement results are background. Background measurements were carried out at the sites of the future construction of the reservoir, pumping station and pipeline route.

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

4.1 Noise and vibration.
The measured noise and vibration are also background.
As a rule, the noise caused by the movement of equipment is reduced at some distance. Such a reduction has logarithmic properties. In the case of noise caused by construction work, the noise propagation scheme from the noise point is used, which can be determined as follows: Noise level 1 - Noise level 2 = 20 log r2 / r1, which means that when doubling the distance, the noise decreases by 6 dBA. .

Table 2: Noise levels

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

4.4 Air quality values

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

"ჩაინა წუქლეარ ინდასტრი 23 ქონსტრაქშენ კო"-ს ფილიალი საქართველოში
"Georgia Branch of China Nuclear 23 Construction Company Co.,Ltd"
ჰაერის მტვერით დაბინძურების, ხმაურის და ვიბრაციის გაზომვების შედეგები
22.09.2022. $12^{10} - 15^{35}$

Dust air pollution, noise and vibration measurements on 22.09.2022. $12^{10} - 15^{35}$

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები Measurement results							
	ადგილ მდებარეობა Location	კოორდინატები Coordinates	ხმაური Aeq დბ Noise Amax db	ვიბრო სიჩქარე Vibro Speed		ვიბრო აჩქარება Vibro acceleration		მტვერი მგ/მ³ Dust mg / m3		
				მმ/წმ mm/s	დბ db	მ/წმ² m/s²	დბ db	Pm2.5	Pm10	Total
1	WWTP 1	0457927 4701723	54,7	<0.1	<66	<0.1	<100	0.025	0.030	0.048
2	WWTP 2	0457037 4701059	78,2	<0.1	<66	<0.1	<100	0.024	0.028	0.037
3	WWTP 3	0457747 4700115	44,1	<0.1	<66	<0.1	<100	0.026	0.031	0.043
4	WWTP 4	0457826 4699476	72.4	0,1	66	0,1	100	0,010	0,012	0,018

ჰაერის აზოტის და გოგირდის დიოქსიდით, ნახშირბადის მონოჟანგით და ჯამური ნახშირწყალბადებით დაბინძურების გაზომვების შედეგები
22.09.2022. $12^{10} - 15^{15}$

Nitrogen and sulfur dioxide, carbon monoxide and total hydrocarbon air pollution measurement results on 22.09.2022. $12^{10} - 15^{15}$

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები მგ/მ³ Measurement results mg/m³			
	ადგილ მდებარეობა Location	კოორდინატები Coordinates	აზოტის დიოქსიდი nitrogen dioxide	გოგირდის დიოქსიდი sulfur dioxide	ნახშირბადის მონოჟანგი carbon monoxide	ჯამური ნახშირწყალბადები total hydrocarbon
1	WWTP 1	0457927 4701723	0,009	<0.01	0,66	<0.1
2	WWTP 2	0457037 4701059	0,018	<0.01	0,39	<0.1
3	WWTP 3	0457747 4700115	0,004	<0.01	0,46	<0.1
4	WWTP 4	0457826 4699476	0,009	<0.01	0,83	<0,1

გაზომვის დროს გამოყენებულია ხელსაწყოები/During measurement tools used:
ხმაური/Noise - Mini Sound Level Meter N05CC;
ვიბრაცია/Vibration- Smart Sensor ® AR63B Vibration Meter:
დამტვერიანება/ Dust- Portable Dust Detector model Lil-HD08
და Gasella Mikro Dust Pro (თვითკალიბრაცია ნულოვანი და ოპტიკური ფილტრით./Self-calibration zero and optical filter.). აზოტის დიოქსიდის და ნახშირბადის მონოოქსიდის - nitrogen dioxide and carbon monoxide - Эллат CO/NO₂
ჯამური ნახშირწყალბადების - total hydrocarbon MiniRae 7600;
გოგირდის დიოქსიდის - sulfur dioxide – WASP-XM-E-SO2.

2001 წლის 16 აგვისტოს, საქართველოს შრომის, ჯანმრთელობისა და სოციალური დაცვის მინისტრის ბრძანება №297/ნ, გარემოს ხარისხობრივი მდგომარეობის ნორმების დამტკიცების შესახებ: / August 16, 2001, the Ministry of Labor, Health and Social Affairs of Georgia №297 / N, approval environmental quality of the norms:
დამტვერიანების ნორმა შეადგენს 0.5 მგ/მ³; / Dust norm is 0.5 mg / m3;
აზოტის დიოქსიდის ნორმა შეადგენს 0.2 მგ/მ³; / nitrogen dioxide norm is 0.2 mg / m3:
გოგირდის დიოქსიდის ნორმა შეადგენს 0.5 მგ/მ³; / sulfur dioxide norm is 0.5 mg / m3;
ნახშირბადის მონოოქსიდის ნორმა შეადგენს .5 მგ/მ³; / carbon monoxide norm is .5 mg / m3
ჯამური ნახშირწყალბადების ნორმა შეადგენს 1 მგ/მ³; / total hydrocarbon norm is .1 mg /m3
ვიბროსიჩქარის ნორმა შეადგენს 112 დბ; / Vibro-speed norm is 112 db;
ვიბროაჩქარების ნორმა სპეციალური დამცავი საშუალებების გამოყენების გარეშე - 126 დბ./Vibro acceleration norm special protective outlets without using - 126 db.

დირექტორი:
Director
ნ. გაბუნია
N. Gabunia

ტექნიკური შემსრულებელი
Technical Contractor
ს. ხიცავა
S. Khitava

NASETO GROUP
412741626

WWTP 1 22.09.2022

China Nuclear Industry 23 Construction Co., Ltd
Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
The Contractor
Address: #5 Java street, 0180 Tbilisi, Georgia
Telephone: +995 571246556

Eptisa Servicios de Ingenieria,S.L.
Mr. Manuel Villafranca, Team Leader
David Gamrekeli Street 2
"Axis" Business Center, 4th floor
Tbilisi Georgia

[your reference/date]	[our reference/date]	[your contact]	[e-mail]
	GUD03-CN123-ENG-22070 2022-11-29	Luo Ke	cni23georgiaofficial@gmail.com

Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
Subject: Environmental Parametric Measurement Report

Dear Mr. Joseph,

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Please take above response into your consideration.

Yours sincerely
Contractor of the Construction of Wastewater Treatment Plants in Gudauri

Mr. Luo Ke
Project Manager

Appendix: Environmental Parametric Measurement Report 10 page.

Copy to: Contractor Internal

Design and Construction of Waste Water Treatment Plant in Guduari (UWSCG-ICB-GUD-03-2018).
Date of Commencement August 1 2019 Term of Work Completion December 2022

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2. Decree No.251/N of the Minister of Labor, Health and Social Affairs of Georgia of September15, 2006– SSMIII, №129, 20.09.2006, Article 1716

3. Decree No.351/N of the Minister of Labor, Health and Social Affairs of Georgia of December 17, 2007– SSMIII, №179, 18.12.2007, Article 1974

4. Decree No.304/N of the Minister of Labor, Health and Social Affairs of Georgia of September 18, 2009– SSMIII, №115, 22.09.2009, Article 1312

5. Decree No.96/N of the Minister of Labor, Health and Social Affairs of Georgia of April 14, 2010– SSMIII, №39, 14.04.2010, Article 622

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

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

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

4.1 Noise and vibration.
The measured noise and vibration are also background.
As a rule, the noise caused by the movement of equipment is reduced at some distance. Such a reduction has logarithmic properties. In the case of noise caused by construction work, the noise propagation scheme from the noise point is used, which can be determined as follows: Noise level 1 - Noise level 2 = 20 log r2 / r1, which means that when doubling the distance, the noise decreases by 6 dBA. .

Table 2: Noise levels

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

4.4 Air quality values

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

"ჩაინა ნიუკლეარ ინდასტრი 23 ქონსტრაქშენ კო"-ს ფილიალი საქართველოში
"Georgia Branch of China Nuclear 23 Construction Company Co.,Ltd"
ჰაერის მტვრით დაბინძურების, ხმაურის და ვიბრაციის გაზომვების შედეგები
21.11.2022. 11^{18} – 16^{40}
Dust air pollution, noise and vibration measurements on 21.11.2022. 11^{18} – 16^{40}

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები Measurement results							
	ადგილი მდებარეობა Location	კოორდინატები Coordinates	ხმაურის Ანდბ Noise Amax db	ვიბრაციის სიჩქარე Vibro Speed		ვიბრაციის აჩქარება Vibro acceleration		მტვერი მგ/მ³ Dust mg / m3		
				მმ/წმ mm/s	დბ db	მ/წმ² m/s²	დბ db	Pmax	Pmax	Total
1	WWTP 1	0457927 4701723	55,7	<0.1	<66	<0.1	<100	0.016	0.021	0.029
2	WWTP 1. უახლოესი დასახლება. nearest population.	0458013 4701757	53,8	<0.1	<66	<0.1	<100	0.013	0.017	0.025
3	WWTP 2	0457037 4701059	54,9	<0.1	<66	<0.1	<100	0.019	0.024	0.032
4	WWTP 2. უახლოესი დასახლება. nearest population.	0457031 4701328	50,1	<0.1	<66	<0.1	<100	0.017	0.023	0.028
5	WWTP 3	0457747 4700115	42,8	<0.1	<66	<0.1	<100	0.011	0.016	0.019
6	WWTP 3. უახლოესი დასახლება. nearest population.	0457716 4700298	43,7	<0.1	<66	<0.1	<100	0.015	0.022	0.029

7	WWTP 4	0457826 4699476	69,8	0,1	66	0,1	100	0,031	0,042	0,056
8	WWTP 4. უახლოესი დასახლება. nearest population	0457862 4699385	59,7	<0,1	<66	<0,1	<100	0,022	0,036	0,041

ჰაერის აზოტის და გოგირდის დიოქსიდით, ნახშირბადის მონოქსიდით და ჯამური ნახშირწყალბადებით დაბინძურების გაზომვების შედეგები
21.11.2022. 11[12] – 16[00]

Nitrogen and sulfur dioxide, carbon monoxide and total hydrocarbon air pollution measurement results on 21.11.2022. 11[11] – 16[00]

№	გაზომვის წერტილის Measurement point		გაზომვის შედეგები მგ/მ³ Measurement results mg/m³			
	ადგილმდებარეობა Location	კოორდინატები Coordinates	აზოტის-დიოქსიდი nitrogen dioxide	გოგირდის დიოქსიდი sulfur dioxide	ნახშირბადის მონოქსიდი carbon monoxide	ჯამური ნახშირწყალბადები total hydrocarbon
1	WWTP 1	0457927 4701723	0.007	<0.01	0,19	<0.1
2	WWTP 1. უახლოესი დასახლება. nearest population.	0458013 4701757	0,006	<0.01	0,21	<0.1
3	WWTP 2	0457037 4701059	0.004	<0.01	0,28	<0.1

4	WWTP 2. უახლოესი დასახლება. nearest population.	0457031 4701328	0,007	<0,01	0,21	<0,1
5	WWTP 3	0457747 4700115	0,004	<0,01	0,18	<0,1
6	WWTP 3. უახლოესი დასახლება. nearest population.	0457716 4700258	0,005	<0,01	0,19	<0,1
7	WWTP 4	0457826 4699476	0,011	<0,01	0,31	<0,1
8	WWTP 4 უახლოესი დასახლება. nearest population	0457862 4699385	0,009	<0,01	0,23	<0,1

გაზომვის დროს გამოყენებულია ხელსაწყოები/During measurement tools used:
ხმაური/Noise - Mini Sound Level Meter N05CC;
ვიბრაცია/Vibration- Smart Sensor ® AR63B Vibration Meter;
დამტვერიანობა/ Dust- Portable Dust Detaqtor model LB-HD08
და Gasella Mikro Dust Pro (თვითკალიბრაცია ნულოვანი და ოპტიკური ფილტრით/Self-calibration zero and optical filter.). აზოტის დიოქსიდის და ნახშირბადის მონოჟანგის - nitrogen dioxide and carbon monoxide - Draw CO/NO_2
ჯამური ნახშირწყალბადების - total hydrocarbon Ion PhoCheck 1000+;
გოგირდის დიოქსიდის - sulfur dioxide – WASP-XM-E-SO2

2001 წლის 16 აგვისტოს, საქართველოს შრომის, ჯანმრთელობისა და სოციალური დაცვის მინისტრის ბრძანება №297/ნ, გარემოს ხარისხობრივი მდგომარეობის ნორმების დამტკიცების შესახებ: / August 16, 2001, the Ministry of Labor, Health and Social Affairs of Georgia №297 / N, approval environmental quality of the norms:
დამტვერიანობის ნორმა შეადგენს 0.5 მგ/მ³; / Dust norm is 0.5 mg / m3;
აზოტის დიოქსიდის ნორმა შეადგენს 0.2 მგ/მ³; / nitrogen dioxide norm is 0.2 mg / m3;
გოგირდის დიოქსიდის ნორმა შეადგენს 0.5 მგ/მ³; / sulfur dioxide norm is 0.5 mg / m3;
ნახშირბადის მონოჟანგის ნორმა შეადგენს .5 მგ/მ³; / carbon monoxide norm is .5 mg / m3;
ჯამური ნახშირწყალბადების ნორმა შეადგენს 1 მგ/მ³; / total hydrocarbon norm is .1 mg /m3;

ვიბროსიჩქარის ნორმა შეადგენს 112 დბ; / Vibro-speed norm is 112 db;
ვიბროაჩქარების ნორმა სპეციალური დამცავი საშუალებების გამოყენების გარეშე - 126 დბ./Vibro acceleration norm special protective outlets without using - 126 db.
გაზომვის მეტოდი – ინსტრუმენტალური, ერთჯერადი, გაზომვის ხანგრძლივობა ერთ წერტილზე არანაკლებ 20 წუთი.
Measurement method - instrumental, single, measurement duration at one point is not less than 20 minutes.

დირექტორი: ნ. გაბუნია
Director N. Gabunia

ტექნიკური შემსრულებელი ს. ხაცავა
Technical Contractor S. Khatsava

ANNEX B: PROJECT PHOTOS

PROJECT PHOTOS GUD-03

Construction of Gudauri Waste Water Treatment Plant N4

Construction of Gudauri Waste Water Treatment Plant N2

Construction of Gudauri Waste Water Treatment Plant N3

ANNEX C: NON-CONFORMANCE NOTICE

Non-compliance GUD-03, 5 July 2022

ADB | NON CONFORMANCE REPORT | eptisa

DETAIL OF PROBLEM

Section of work:	WWTP#1, #2, #3 and WWTP#4			NCR No:	GUD03-006
NC detail:	See attached list				
Issued by:	Joseph Pasion - RE	Received by:	Wang Guangde		Action dates
				Proposal:	30 - Jun - 22
Sign:	[signature]	Sign:	[signature]	Repair:	30 - Jun - 22
Date:	29-Jun-22	Date:	29 - Jun - 22	Inspection:	30 - Jun - 22

CONTRACTOR'S PROPOSAL TO CORRECT THE NC — Accepted

1. Constructor site properly fenced from all sides and proper warning and information signs on the lockable gates.
2. Deep excavation zone be arranged by warning signs deep excavation zone and fenced with metal mesh material
3. Hazardous waster container be instal at the proper organized place with relevant labling

Signed By [signature]
Date: 30 - Jun - 22

CONTRACTOR'S PROPOSED ACTION TO PREVENT RECURRENCE — Accepted

1. Special training was carried out for site managers and workers to avoid recurring similar problem
2. strength on-site safety management and also safety guide strength subcontractor safety management.
3. Warn all the workers on site to avoid the same problem
4. the fine measures will be used for the safety management

Signed By [signature]
Date: 30 - Jun - 22

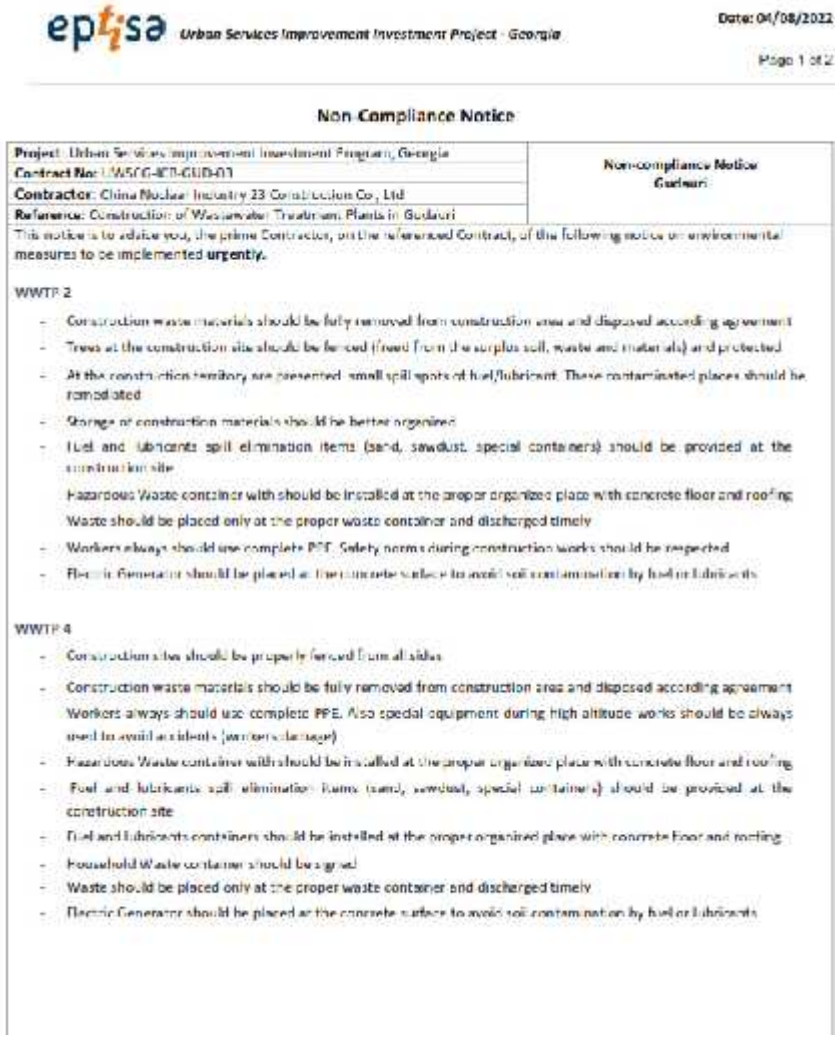
COMMENTS (DURING ANY STAGE)

PROBLEM ADDRESSED AND RESOLVED - NCR CLOSED

Contractor: ____________ Date: ____________

Engineer: ____________ Date: ____________

Non-compliance GUD-03, 4 August 2022



epiisa Urban Services Improvement Investment Project - Georgia

Date: 04/08/2022

Page 1 of 2

Non Compliance Notice

Project: Urban Services Improvement Investment Program, Georgia	**Non-compliance Notice Gudauri**
Contract No: UWSIG-ICB-GUD-01	
Contractor: China Nuclear Industry 23 Construction Co., Ltd	
Reference: Construction of Wastewater Treatment Plants in Gudauri	

This notice is to advise you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented **urgently.**

WWTP 2

- Construction waste materials should be fully removed from construction area and disposed according agreement
- Trees at the construction site should be fenced (freed from the surplus soil, waste and materials) and protected
- At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated
- Storage of construction materials should be better organized
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- Waste should be placed only at the proper waste container and discharged timely
- Workers always should use complete PPE. Safety norms during construction works should be respected
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants

WWTP 4

- Construction site should be properly fenced from all sides
- Construction waste materials should be fully removed from construction area and disposed according agreement
- Workers always should use complete PPE. Also special equipment during high altitude works should be always used to avoid accidents (workers damage)
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Fuel and Lubricants containers should be installed at the proper organized place with concrete floor and roofing
- Household Waste container should be signed
- Waste should be placed only at the proper waste container and discharged timely
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants

Photos of WWTP 2

Photos of WWTP 4

All these conditions have to be remedied within seven days (by the 12.08.2022) by the prime Contractor (China Nuclear Industry 23 Construction Co., Ltd)

Date of site visits 03.08.2022	
Irakli Legashvili EPTISA - Environment	

Non-compliance GUD-03, 29 August 2022

eptisa *Urban Services Improvement Investment Project - Georgia*

Date: 25/08/2022

Non-Compliance Notice

Project: Urban Services Improvement Investment Program, Georgia	**Non-compliance Notice Gudauri**
Contract No: UWSCC-ICB-GUD-03	
Contractor: China Nuclear Industry 23 Construction Co., Ltd	
Reference: Construction of Wastewater Treatment Plants in Gudauri	

This notice is to advise you, the prime Contractor, of the referenced Contract of the following notice on environmental measures to be implemented **urgently.**

WWTP 1

- Household Waste container should be signed "Household Waste"
  Top soil should be stored stored properly, better managed (height of fill must not exceed 2 m and the inclination of the fill slope must not exceed 45°), fenced by tape and signed
- Construction waste should be removed from site completely and disposed according agreement
- Construction materials should be stored/segregated properly
- Workers always should use complete PPE. Safety norms during construction works should be respected
  excesses of excavation soil should be removed according the agreement

WWTP 2

- Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction waste materials should be fully removed from construction area and disposed according agreement
  Trees at the construction site should be fenced (freed from the surplus soil, waste and materials) and protected
- Excesses of excavation soil should be removed according the agreement
- At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated
  Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants
  Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing and signed "Hazardous Waste"
  Household Waste container should be signed "Household Waste"
- Waste should be placed only at the proper waste container and discharged timely
- Storage of construction materials should be better organized
- Workers always should use complete PPE. Safety norms during construction works should be respected

WWTP 4

- Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction waste materials should be fully removed from construction area and disposed according agreement
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing and signed "Hazardous Waste"
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing

- At the construction territory are presented small spill spots of fuel/lubricant. These contaminated places should be remediated
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants
- Proper Household Waste container should be installed and signed "Household Waste"
- Waste should be placed only at the proper waste container and discharged timely
- Workers always should use complete PPE

Photos of WWTP 1






Photos of WWTP 2






Photos of WWTP 4



All these conditions have to be remedied within seven days (by the 06.09.2022) by the prime Contractor (China Nuclear Industry 23 Construction Co., Ltd)

Date of site visits 26.08.2022	
Irakli Lagvilava EPTISA - Environment	

Non-compliance GUD-03, 3 November 2022

epsa *Urban Services Improvement Investment Project - Georgia*

Date: 03/11/2022

Non-Compliance Notice 03.11.2022

Project: Urban Services Improvement Investment Program, Georgia	**Non-compliance Notice Gudauri**
Contract No: UWSDG-ICB-GUD-03	
Contractor: China Nuclear Industry 23 Construction Co., Ltd	
Reference: Construction of Wastewater Treatment Plants in Gudauri	

The notice is to advise you, the prime Contractor, on the referenced Contract, of the following notices on environmental measures to be implemented **urgently**.

WWTP 1

- Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction waste materials and surplus soil should be fully removed from construction area and disposed according agreement
- Construction materials should be better stored/segregated, fenced and labeled

  At the construction territory are presented spill spots of fuel/lubricant. These contaminated places should be remediated
- Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- Waste should be placed only at the proper waste containers and discharged timely
- Workers always should use complete PPE
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants
- Construction territory should be regularly cleaned

WWTP 2

- Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction materials should be better stored/segregated, fenced and labeled
- Construction waste materials should be fully removed from construction area and disposed according agreement

  Excesses of excavation soil should be removed according the agreement
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Containers with hazardous substance should be stored at the proper organized place with concrete floor and roofing
- During using electrical equipment safety norms should be respect (electric cables should be protected)
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- Waste should be placed only at the proper waste containers
- Scrap metal materials should be placed at the dedicated place, fenced and labeled
- Electric Generator should be placed at the concrete surface to avoid soil contamination by fuel or lubricants
- Construction territory should be regularly cleaned
- Workers always should use complete PPE

WWTP 3

- Construction sites should be properly fenced from all sides and equipped with lockable gate

- Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction waste materials and excesses of excavation soil should be fully removed from construction area and disposed according agreement
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- For waste should be used only standard containers and signed
- Waste should be placed only at the proper waste container
- Construction territory should be regularly cleaned
- Workers always should use complete PPE

WWTP 4

- Safety norms during construction works should be respect. Safe walkways with handrail on open trenches and wells should be used to avoid workers falling and damage
- Construction sites should be properly fenced from all sides
- Construction waste materials and surplus soil should be fully removed from construction area and disposed according agreement
- Waste containers should be signed
- Hazardous Waste container with should be installed at the proper organized place with concrete floor and roofing
- Waste should be placed only at the proper waste container and discharged timely
- Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be provided at the construction site
- Fuel and lubricants containers should be installed at the proper organized place with concrete floor and roofing
- Workers always should use complete PPE
- Construction territory should be regularly cleaned

Photos of WWTP 1



Photos of WWTP 2

Photos of WWTP 3

Photos of WWTP 4

All these conditions have to be remedied within five days (by the 08.11.2022) by the prime Contractor (China Nuclear Industry 23 Construction Co., Ltd)

Date of site visits 01.11.2022	

ANNEX D: CORRECTIVE ACTION PLAN, AFTER SITE VISIT ON 29 August 2022

China Nuclear Industry 23 Construction Co., Ltd
Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
The Contractor
Address: #5 Java street, 0180 Tbilisi, Georgia
Telephone: +995 571246556

Eptisa Servicios de Ingenieria,S.L.
Mr. Joseph Pasion, Resident Engineer
Budapest #13b
0160 Tbilisi, Georgia

[your reference/date]	[our reference/date]	[your contact]	[e-mail]
	GUD03-CNI23-ENG-22046 2022-08-31	Luo Ke	gudauri@cni23.com

Construction of Wastewater Treatment Plants in Gudauri
(UWSCG-ICB-GUD-03-2018)
Subject: Reply to the Non-Compliance EPT/USIIP/TL/2786 Gudauri WWTPs 29-AUG-2022

Dear Mr. Joseph Pasion,

After receiving the Non-Compliance EPT/USIIP/TL/2786 Gudauri WWTPs 29-AUG-2022, the Contractor immediately rectified the violations on site. At the same time, special training was carried out for site managers and workers to avoid recurring similar problems, Please refer to the attachment for details of the rectification.

Appendix1 : Photos of Rectification of Non Compliance Notice

Yours sincerely
Contractor of the Construction of Wastewater Treatment Plants in Gudauri

Mr. Luo Ke
Project Manager
Copy to: Contractor internal

Appendix1 : Photos of Rectification of Non-Compliance Notice

Rectification photos of WWTP1:

Photos Befour Rectification	Photos After Rectification
	
	
	

Rectification photos of WWTP2:

Photos Befour Rectification	Photos After Rectification
	

Rectification photos of WWTP4:

Photos Befour Rectification	Photos After Rectification
	
	

ANNEX E: DISPOSAL OF WASTE UNDER GUD-03 SUB-PROJECT

DISPOSAL OF CONSTRUCTION WASTE, AGREEMENT BETWEEN THE GEORGIAN SOLID WASTE MANAGEMENT COMPANY AND CONTRACTOR – LTD "CHINA NUCLEAR 23 CONSTRUCTION CO."

HAZARDOUSE WASTE DISPOSAL SERVICE AGREEMENT BETWEEN THE LTD "CHINA NUCLEAR INDUSTRY 23 CONSTRUCTION CO." AND MEDICAL TECHNOLOGY.