

ENVIRONMENTAL MONITORING REPORT

#9 Semiannual Report

(Reporting Period: July-December 2021)

Project Number: 43405-028

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM
(TRANCHE 6)**

(FINANCED BY THE ASIAN DEVELOPMENT BANK)

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

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ABBREVIATIONS

| | |
|-------------------|--|
| ADB | Asian Development Bank |
| DC | Design Consultant |
| DEPRP | Department of Environmental protection, Resettlement and Construction Permit |
| DIPDR | Department of International Procurement and Donors Relations |
| 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 |
| IA | Implementing Agency |
| IPMO | Investment Program Management Office |
| IEE | Initial Environmental Examination |
| MFF | Multi-tranche Financing Facility |
| MEPA | Ministry of Environmental Protection and Agriculture |
| MoRDI | Ministry of Regional Development & Infrastructure |
| NEA | National Environmental Agency |
| OJSC | Open Joint Stock Company |
| SC | Supervision Consultant |
| USIIP | Urban Sector Improvement Investment Program |
| UWSCG | United Water Supply Company of Georgia |
| WHO | World Health Organization |
| WSS | Water Supply & Sewerage |

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I. INTRODUCTION

1.1 Preamble

1. This report represents the Semi-annual Environmental Monitoring Review (SAEMR) for the Urban Services Improvement Investment Program, Tranche 6 and describes the period of July-December 2021.
2. This report is the 9th Environmental Monitoring Review (EMR) of USIIP/Tranche 6.

1.2 Headline Information

3. During the reporting period construction activities were carried out only under MAR-02 and CHI-01 sub-projects and therefore this report describes the activities performed within the framework of these projects.
4. There were no construction activities under MAR-01 sub-project during the July-December 2021, due to severe financial constraints being faced by the contractor. The overall progress of the civil works under Mar-01 is about 31.4%.
5. Construction activities were not affected by the COVID-19 pandemic, there were no travel restrictions as well and the EH&S specialist of Supervision Company HILL and the Environmental specialist of USIIP monitored construction sites on a regular basis. Workers complied with all regulations, including social distancing from the COVID-19 pandemic.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

6. The Urban Services Improvement Investment Program was developed as the Government's response to the lack of adequate and/or safe water supply, sewerage and sanitation in urban areas of Georgia. This is intended to optimize social and economic development in selected urban areas through improved urban water and sanitation services, and is financed by the ADB through its Multi-tranche Financing Facility. The Ministry of Regional Development and Infrastructure is the Executing Agency and the United Water Supply Company of Georgia, LLC is the Implementing Agency of the Investment Program. UWSCG is a 100% state-owned company.
7. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements will include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works will include sewer network, pumping stations, main collectors and waste water treatment plants.
8. **Tranche 6 of the Investment Program includes:**
 - Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01);
 - Construction of Waste Water Treatment Plant Construction for Marneuli and Bolnisi in Maneuli (MAR-02);
 - Construction of Water Supply System in Chiatura (CHI-01).

The following projects are financed under Tranche 6:

9. **Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01):** Mar-01 project envisages the rehabilitation and construction of reservoirs with the total capacity of 12,000M³=(2X3000+3X2000); construction of cast iron transmission pipeline with the diameter of 700 mm - 10 km and 600 mm – 4km; construction of network with Polyethylene pipes of OD 50 to OD 500. The project measures for the sewer network comprise the lying about 150 km new gravity pipes (DN 150 to DN 800) and 2.7 km new pressure pipes (OD 110 and OD 225). There will be 9 new wastewater pumping stations; 600mm to 1000 mm diameter inspection wells (concrete or polyethylene) and 400 mm diameter house connections (polyethylene). Proposed project envisages construction of sewerage system in Bolnisi which will work entirely by gravity (DN 200 and DN 250 HDPE pipes) and will be connected at 3 different points to the future DN 500 HDPE interceptor that will convey the collected sewer from Bolnisi to Marneuli WWTP.
10. Three separate IEEs were prepared for MAR-01 project: Improvement of Marneuli Water Supply System (August 2016); Improvement of Marneuli Wastewater System (August 2016); Improvement of Bolnisi Wastewater System (August 2016) and further updated and approved in January 2019 due to the finalization of the project design (please see para 3 above).

11. The contract No P43405-ICB-MAR-01 was signed on November 20, 2018 with “Akelik Group OJSC” (Azerbaijan). The original completion date of the contract is March 29, 2021, proposed extension by contractor is 210 days. Revised completion date proposed is December 2021.
12. **Construction of Waste Water Treatment Plant for the Cities of Marneuli and Bolnisi in Marneuli (MAR-02).** The project comprises of the construction of new Wastewater Treatment Plant in Marneuli with the capacity of 9,931 m³/day.
13. The contract No UWSCG-ICB-MAR-02-2019 was signed in October 18, 2019 with Joint venture of Toshiba Water Solutions Pvt. Ltd and IN-SI LLC (JV partner) (India/Georgia). The scheduled completion date is May 2021, Completion date has been proposed to be extended by 385 days. Revised completion date shall be 18 June 2022.
14. **Construction of Water Supply System in Chiatura (CHI-01).** The work under the CHI-01 project comprises the rehabilitation and construction of the water supply network, transmission pipeline and Reservoirs. In particular, Chi-01 project consists of the following works: the rehabilitation of the existing WS system by replacing the old pipework, rehabilitation of existing reservoirs and pumping stations; construction of 2 new reservoirs and pump houses; construction of 7 new borewells in Sachkhere and connect these to Bisi reservoir; laying of new transmission mains.
15. The contract No P43405-ICB-CHI-01 was signed on August 21, 2017 with “Akkord Industry Construction Investment Corporation” OJSC” (Azerbaijan), the initial completion date on April 15, 2019. The original date for the defect notification is April 14, 2020, which has been extended to December 2021. Independent consultant will be hired by Supervision Consultant/HILL to conduct post construction audit. Main findings of this audit report will be reflected in the next SAEMR, January-June 2022.

2.2 Project Contracts and Management

16. The main institutions that are involved in implementation of the EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environmental Protection and Agriculture of Georgia (MoEPA).
17. The Investment Program Management Office (IPMO) under UWSCG, which was renamed in November 2021 from the Project Management Department to the Donor Funded Project Management Department, is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist who is responsible for managing the environmental aspects of the USIIP. The head of the department was also replaced, and Ms. Irina Chikhladze was appointed as Acting Head of the Department instead of Ms. Ana Onashvili.
18. The IPMO (Environmental Specialist) responsibilities in respect of implementation of the EMP are as follows:
 - (i) Approve the Site Specific Environmental Management Plan (SSEMP) before Contractor takes possession of construction site;
 - (ii) Monitor implementation of EMP and ensure the environmental safeguards compliance;
 - (iii) Review the updated IEE and/or SEMP and send it for clearance to ADB;
 - (iv) Ensure that contractors have access to the EMP and IEE report;
 - (v) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website;

- (vi) Review and approve the Corrective Action Plan and provide to ADB for review and comments if any;
- (vii) Participate in public consultations during project implementation;
- (viii) In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints;
- (ix) Assist in organizing trainings for the Contractors in coordination with ADB/RETA consultant;
- (x) Participate in external trainings in environmental management and environmental auditing

19. The SC include a full time Environmental Specialist to assist the IPMO supervise and monitor implementation of the EMP during construction.

20. The Contractor also appoint a full time Environmental specialist to be a senior member of the construction management team based on site for the duration of the contract. The ES has a university degree (preferably at Masters level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project.

21. Department of Environmental Protection and Permits of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP sub-projects. More detailed description of implementation arrangements; responsibilities and staffing are provided in the Table 1 below.

Table 1: Institutionnel Arrangement, Responsabilités and Staffing

| # | Millstones/Actions | Contractor (Environmental Specialist) | Construction Supervision Consultant (Environmental Specialist) | IPMO (Environmental Specialist) | Environmental Protection and Permits Department (Environmental Specialist) |
|---|--|---|---|--|--|
| 1 | Environmental planning and management Contractors Environmental Management Plan (site-specific EMP) | Prepare Specific EMP (SEMP) with supplemented Topic Specific EMPs at pre-construction stage based on IEE/EMP Implement SEMPs approved by IPMO. | Review and endorse the SEMPs; Monitor implementation of SEMPs 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 SEMPs; Implement updated SEMPs. | Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMPs. | Review the updated IEE and/or SEMPs and send it for clearance to ADB | Liaise with CSC in preparing updated IEE and/or SEMPs; 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 SEMPs | Review the updated IEE and/or SEMPs and send it for clearance to ADB | Liaise with CSC in preparing updated IEE and/or SEMPs |

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

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

22. Main organizations involved in the project and related to environmental safeguard are presented in the Table 2 below:

Table 2: List of Main Organizations under USIIP/T6

| Type of project participant | Name of Agency/Company | Environmental Staff | Name and contact details |
|-----------------------------|---|--|---|
| Lender | Asian Development Bank | Country Environmental Focal | Ninette R. Pajarillaga E-mail: npajarillaga@adb.org |
| | | Associate Safeguards Officer Georgia Resident Mission Asian Development Bank | Nino Nadashvili Tel: +995 595 070442 nnadashvili@adb.org |
| | | ADB RETA International Environmental Consultant | Keti Dgebuadze Tel: +995 577232937 ketdgeb@yahoo.com |
| Borrower | UWSCG | UWSCG, Department of Environmental Protection and Permits, Head | Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge |
| | | UWSCG/IPMO the Donor Funded Project Management Department, Acting Head | Ms. Irine Chikhladze Tel: +995 598 179898 E-mail: ana.onashvili@water.gov.ge |
| Borrower | UWSCG/USIIP/T6 | Environmental Specialist | Ms. Ketevan Chomakhidze Tel: +995 577 380309 E-mail: Chomakhidzek@yahoo.com |
| Supervision Consultant | Supervision Consultant: Hill International N.V. (Netherlands) | Environmental Specialist | Mr. Rezo Enukidze Tel: +995 599 164 469 E-mail: r.enukidze@gmail.com |

| Type of project participant | Name of Agency/Company | Environmental Staff | Name and contact details |
|-----------------------------|---|------------------------------|--|
| Contract or CHI-01 | “Akkord Industry Construction Investment Corporation” OJSC (Azerbaijan) | EH&S Specialist | Environmental Specialist of CC: Name: Mr. Teodor Kalmakhelidze Tel: +995 598 977 977 E-mail: kalmakhelidzetedore@gmail.com |
| Contract or MAR-01 | Akelik Group OJSC (Azerbaijan) | Environmental Specialist | Mr. Paata Chankotadze Tel: +995 599 181753 E-mail: paatachank@yahoo.com |
| | | HSE Manager | Mr. Natig Aliev E-mail: aliyevnatig@mail.ru Mob: +995 593 60 44 48 |
| | | HSE Engineer | Mr. Zaur Askerov E-mail: askerovzaur43@gamil.com Mob: +995 593 39 00 29 |
| Contract or MAR-02 | Toshiba Water Solutions Pvt. Ltd and IN-SI LLC (JV partner) (India/Georgia) | Environmental H&S Specialist | Mr. Guram Tandilashvili E-Mail: guram.tandilashvili@gmail.com Mob: +995 577 36 37 29 |

2.3 Project Activities during Current Reporting Period

2.3.1 Construction progress under CHI-01 project

23. The physical progress of construction activities under CHI-01/Avarioni and Sapari section during the reporting period, July-December 2021 is given in the Table 3 below.

Table 3: Physical Progress of Works for Avarioni and Sapari

| Item No | Description | Unit | Quantity Project | Quantity Completed as of 30.06.21 | Percentage |
|---------|---|------|------------------|-----------------------------------|----------------|
| 1 | HDPE Pipes installation including fittings and end caps as required. | m | 7,384.00 | 4,985.00 | 67.51 % |
| 2 | Cleaning, flushing and disinfection with chlorine of installed pipelines, including supply and disposal of water | m | 7384 | 0 | 0 |
| 3 | Trenches for pipe installation | m3 | 7,320.00 | 4,241.16 | 57.94 % |
| 4 | Valves | | 44.00 | 13.00 | 29.55 % |
| 5 | House connections implementation and administrative requirements | n | 340.00 | 165.00 | 48.53 % |
| 6 | Hydraulic Chambers | n | 12.00 | 9.00 | 75.00 % |
| 7 | New Reservoir 500 m3 | n | 1.00 | 52,15% | 52,15 % |
| 8 | Reservoir Mechanical Installation | ls | 1.00 | 25.00% | 25.00 % |
| 9 | Pumping Station Mechanical Installation | ls | 1.00 | - | 0.00% |
| 10 | Electrical Equipment | ls | 1.00 | - | 0.00% |
| 11 | Instruments and SCADA system | ls | 1.00 | - | 0.00% |
| 12 | New Pumping Station Construction | ls | 1.00 | - | 0.00% |
| 13 | Construction of New PS building in front of Bisi Reservoir | ls | 1.00 | 38,25% | 38,25 % |
| 14 | Total Progress for Construction of water supply system for Avarioni & Safari areas, during the reporting period. | | | | 57,62 % |

24. The physical progress of main contract section 1 is given in the Table 4 below.

Table 4: Physical Progress of main Contract Section 1

| Pipeline | Unit | Quantity (BoQ) | Up to Previous Month | This Month | Cumulative up to June 2021 | Progress |
|-----------------------------|------|----------------|----------------------|------------|----------------------------|----------|
| Main Transmission Line | m | 16.038 | 16038 | 0 | 16038 | 100.00% |
| Distribution Network | m | 68.391 | 68.391 | 0 | 68.391 | 100.00% |
| DN355 Bisi-CPS Transmission | m | 745 | 745 | 0 | 745 | 100.00% |
| DN160 CPS-Lezhubani | m | 2,165 | 2165 | 0 | 2165 | 100.00% |
| DN160 CPS-Perevisi | m | 1,810 | 1810 | 0 | 1810 | 100.00% |
| DN225 CPS-Rustaveli | m | 1,264 | 1264 | 0 | 1264 | 100.00% |
| DN225 Lezhubani Res to PS | m | 341 | 341 | 0 | 341 | 100.00% |
| Q200 ST Lezhubani PS | m | 2025 | 2025 | 0 | 2025 | 100.00% |

| Pipeline | Unit | Quantity (BoQ) | Up to Previous Month | This Month | Cumulative up to June 2021 | Progress |
|------------------------------------|----------|----------------|----------------------|------------|----------------------------|----------------|
| Memorial Res | | | | | | |
| Q100 ST Perevisi PS - Tekhisa Res | m | 2053 | 2053 | 0 | 2053 | 100.00% |
| DN160 Memorial-Navardzeti | m | 1,470 | 1470 | 0 | 1470 | 100.00% |
| Giorgadze area | m | 1,540 | 1450 | 0 | 1450 | 100.00% |
| Total Laid Pipe | m | 97,306 | 97,306 | 0 | 97,306 | 100.00% |
| House Connection | n | 8,457 | 8,457 | 0 | 8,457 | 100% |
| Crossings | n | 10 | 0 | 0 | 0 | 100% |
| Hydraulic Chambers | m3 | 1,219 | 1219 | 0 | 1219 | 100% |
| Hydrants | n | 205 | 205 | 0 | 205 | 100% |
| Reinstatement of Asphalt | m2 | 50000 | 37,595 | 0 | 37,595 | 75% |
| Reinstatement of Concrete Pavement | m2 | 4,600 | 275 | 0 | 275 | 6% |

2.3.2 Construction progress under MAR-01 project

Construction of Water Supply and Waste Water Systems in Marneuli (MAR-01)

25. There were no construction activities under MAR-01 sub-project during the reporting period, July-December 2021. The physical progress of construction activities under MAR-01 sub-project is provided in the Table 5 below.

Table 5: Physical Progress of Structures to December 2021

| Structure | Civil | Mechanical | July-December 2021 |
|--------------------------|-------|------------|--------------------|
| Jandhari Reservoir | 82% | 5% | 0% |
| Kolagiri Pumping Station | 82% | 3% | 0% |
| City Reservoir | 45% | 0 | 0% |

26. Cumulative physical progress of water supply and sewer pipes are presented in the Table 6 below.

Table 6: Cumulative Physical Progress of Water Supply and Sewer Pipes up to June 2021

| Particulars | Water Supply Pipes | | | Sewer Pipes | | |
|-------------|--------------------|------------|--------|-------------|-----------|--------|
| | To be laid | laid | % | To be laid | Laid | % |
| Marneuli | 191555 | 112,634.13 | 58.80% | 150512 | 68,441.92 | 45.47% |
| Bolnisi | 0 | 0 | 0.00% | 61100 | 8,364.68 | 13.69% |
| Interceptor | 0 | 0 | 0.00% | 22000 | 8,195.74 | 37.25% |
| Total | 191555 | 112,634.13 | 58.80% | 233612 | 72,519.56 | 31.04% |

27. Thus, overall, 72,519.56 m sewer pipes (31.04% of required) & 112,634.13 m water supply lines (58.80% of required) have been laid.

2.3.3 Construction progress under MAR-02 project

Construction of Wastewater Treatment Plant in Marneuli (MAR-02)

28. Physical works under MAR-02 sub-project started in January 2021. The retaining wall and concrete work for some buildings have been done. The cumulative progress is given below. Completion date has been proposed to be extended by 385 days. Initial completion date was 29 May 2021 & revised completion date shall be 18 June 2022.

Table 7: Cumulative Total Progress, July-December 2021

| Cumulative Total Progress for WWTP Marneuli MAR 02 | | | | | | | | | | | | | |
|--|---|-------------------------------|-------|------|----------------------|------------------------|------|------|-------|----------------|------|------|-------|
| Schedule | Particulars | | | | Up to Previous Month | Current Month | | | | Total | | | |
| (I) | Site Mobilization | | | | 98,04% | 0,00% | | | | 98,04% | | | |
| (II) | Excavation work | | | | 60,00% | 7,32% | | | | 67,32% | | | |
| (III) | Installation structural Civil work | | | | 15,38% | 0,00% | | | | 15,38% | | | |
| (III-1) | Installation Architectural work | | | | 0% | 1,13% | | | | 1,13% | | | |
| (IV) | Supply of Equipments | | | | 0% | 22,55% | | | | 22,55% | | | |
| (V) | Installation Mechanical | | | | 0% | 0% | | | | 0% | | | |
| (VI) | Installation electrical | | | | 0% | 0% | | | | 0% | | | |
| VII) | Algeti 35kv Power Line relocation (change order 1) | | | | 100,00% | 0% | | | | 100,00% | | | |
| Cumulative Physical Progress | | Up to Previous Month % | | | | Current Month % | | | | Total % | | | |
| Structures | | Civil | Mech. | Elec | Arch. | Civil | Mech | Elec | Arch. | Civil | Mech | Elec | Arch. |
| Site mobilization & Soil Investigations | | 98,04 | No | No | No | 0 | No | No | No | 98,04 | No | No | No |
| Temporary Fence | | 100 | No | No | No | 0 | No | No | No | 100,0 | No | No | No |
| RC Wall | | 98,12 | No | No | No | 0 | No | No | No | 98,12 | No | No | No |
| Garage & workshop | | 100,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | | 100,0 | 0,0 | 0,0 | 0,0 |

2.3.4 Description of Any Changes to Project Design

29. During the reporting period there were no changes in project design.

2.3.5 Description of Any Changes to Agreed Construction methods

30. During the reporting period there were no changes in construction methods.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

31. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC, Mr. Rezo Enukidze and Environmental Specialist of USIIP Ms. Ketevan Chomakhidze.
32. Due to the fact that The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic the Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) which applies to all sectors of economic activity.
33. General guidelines on COVID-19 have been additionally developed specifically for the construction sector (see Appendix D) by the Government of Georgia.
34. This COVID-19 Construction Sector Guidelines have been created to provide construction project owners/operators and their employees and contractors with precautions to protect against the spread of COVID-19 on indoor and outdoor construction sites.
35. In May 2020 SC / HILL has developed an emergency response plan (ERP) to prevent employees against COVID-19 (Please see ANNEX G). In addition, in June 2020 contractors updated all EH&S documents, including health and safety plans and site-specific environmental management plans.
36. During the reporting period per the ERP plan and regulations, some additional precautions were taken against the spread of COVID-19 within the MAR-02 sub-project. Please see attached photos in Annex B.
37. During the reporting period, the environmental monitoring activities under CHI-01 and MAR-02 sub-projects included:
 - The monitoring of compliance of construction activities under CHI-01 project sites to the IEE/EMP requirements;
 - The monitoring of compliance of construction activities under MAR-02 project sites to the IEE/EMP requirements;
38. During the reporting period Environmental Specialist of contractor under CHI-01 sub-project, Mr. Teodor Kalmakhelidze conducted daily monitoring of construction sites and developed monthly monitoring reports and represented to SC / Hill. At the end of the reporting period, Mr. Teodor Kalmakhelidze left the position and a new specialist has not been identified yet. IPMO will clarify the reason for the EP's removal, and details will be provided in the next SAEMR report as of in January-June 2022.
39. Environmental, H&S Specialist, Mr. Guram Tandilashvili hired by Contractor under the MAR-02 sub-project conducted the day-to-day monitoring of the Marneuli WWTP construction site and developed monthly monitoring reports and represented to SC / Hill.
40. Environmental Monitoring Specialist, Ms. Rezo Enukidze hired by Supervision Company under USIIP/T6 developed quarterly monitoring reports for UWSCG/USIIP based on the monthly reports submitted by Contractor, and environmental monitoring of construction sites.

41. Environmental Specialist of UWSCG/USIIP, Ms. Ketevan Chomakhidze performed monitoring of contractor's performance with the approved EMPs and SSEMPs, environmental standards and other environmental commitments of the contractor. ES develops Semi-annual Environmental Monitoring Reports (SAEMR) for USIIP/T6 and submits to ADB based on the quarterly reports prepared by SC and monitoring results of construction sites.
42. The construction activities under CHI-01 and MAR-02 sub-projects affecting the environment during the reporting period are as follows:
- Excavation works;
 - Removal of Surplus Soil;
 - Backfilling of Trenches;
 - PPE;
 - Top soil stripping and storage;
 - Manual works;
 - Reinforcement
43. In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, noise and socio-cultural resources. The monitoring guidelines were set as shown in the Table 8 below.

Table 8: Parametric Measurement Guidelines

| Parameters | Frequency & Location | Remarks |
|---|---|---|
| CHI-01 | | |
| Air Quality | Quarterly. Reservoirs, Networks, Transmission Main | Watering site during excavation works to avoid dust spreading Conduct measurements of PM2.5, PM10; CO Mg/m3; NO2 Mg/m3; SO2 Mg/m3 |
| Noise | Quarterly. Reservoirs, Networks, Transmission Main | Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm |
| Incorrect surplus/waste soil management | Monthly during the site Inspection and audit | Utilize surplus/waste soil for beneficial purposes such as in construction or to raise the ground-level of low lying sites. Dispose extra waste soil at special disposal place identified by Municipality |
| Cultural heritage Disturbance to cultural resources | Every time along the alignment Archaeological & Cultural Properties | Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are |

| Parameters | Frequency & Location | Remarks |
|---|---|---|
| | | protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection. |
| MAR-02 | | |
| Air Quality | WWTP construction site | Watering site during excavation works to avoid dust spreading Conduct measurements of PM2.5, PM10; CO Mg/m3; NO2 Mg/m3; SO2 Mg/m3 |
| Noise | WWTP construction site | Ensure that all equipment & vehicles used for construction activity are in good condition Limiting working hours to 8 am – 6 pm |
| Cultural heritage Disturbance to cultural resources | Every time along the alignment Archaeological & Cultural Properties | Contractor shall put in place a protocol for conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. Calling in the state archaeological authority if a find is suspected, and taking any action they require to ensure its removal or protection. |

44. There are no protected areas, wetlands, mangroves, or estuaries. Trees, vegetation (mostly shrubs and grasses), and animals in the subproject sites are those commonly found in built-up areas. The geological structure of the area is stable and no potential land subsidence is foreseen.

3.2 Site inspections/monitoring

45. Inspection and monitoring of construction sites under CHI-01 and MAR-02 sub-project was conducted by ES of USIIP Ms. Kate Chomakhidze and ES of SC/HILL Mr. Revaz Erukidze, taking into account all restrictions and regulations described in 30-35 paragraphs above. The day-to-day monitoring of sites to compare compliance with national and international EH&S requirements under CHI-01 sub-project was conducted by the Environmental Specialist of Mr. Teodor Kalmakhelidze. Day to day monitoring of sites under MAR-02 sub-project was




conducted by the Environmental Specialist of CC Mr. Guram Tandilashvili during the reporting period as well.

- 46.** The schedule of Joint inspection and summary of inspections/monitoring carried out under sub-projects are provided in the Table 9 below. It should be noted also that the majority of non-compliances are improved by contractor during the reporting period, issues pending and need further improvement is presented in the Table 20 below.


Table 9. Summary of site inspections/monitoring for CHI-01, MAR-01 and MAR-02 sub-projects.



| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | ¹ Implementation Status |
|---|---|---|---|--|--|--|
| Continuously during reporting period (July-December 2021) | "Akkord Industry Construction Investment Corporation" OJSC CHI-01 | Environmental, H&S Specialist of Contractor Mr. Teodor Kalmakhelidze | Day to day monitoring of sites Compliance with Environmental and HES requirements | Environmental, Health and safety issues on construction sites | Prepare Monthly Environmental Monitoring Reports and send to SC | Completed on the monthly basis during the reporting period, July-December 2021 |
| | | Environmental Specialist of Supervision Company HILL Mr. Rezo E nukidze | Compliance with Environmental safeguard requirements | Environmental issues on construction sites | Prepare Quarterly Environmental Monitoring Reports and send to UWSCG; Issue non-compliance if necessary | Completed in December 2021 and July 2021 |
| 8 August 2021 | | Environmental Specialist of SC Mr. Rezo E nukidze | Regular monitoring of sites | Abandoned, unfinished construction activities were observed during the site visit. Roads are not reinstated; materials are left in the street. The Contractor shall | Verbal instruction was given to contractor to immediately improve the situation. Non-Compliance Notice was issued and | Completed in August 2021 |



¹ The USIIP/T6/MAR-01 subproject has several pending non-compliance, which are described in paragraphs 52-57 in the subsection entitled: Pending issues under MAR-01 sub-project, and Implemented Measures.

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---------------|---|---------------|------------------|--|---|-----------------------|
| | | | | <p>complete activities, which are abandoned and might cause complaints from locals.</p> <p>photo No1</p>  <p>Photo No2</p>  | <p>is presented in Annex C to this report.</p> <p>Corrective Action Plan was developed and improved photos of sites was sent by contractor (please see Annex E),</p> <p>Please see improved Photo N1 of site</p>  | |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|------------------|---|--|-----------------------------|--|---|---|
| | | | | | | |
| 3 September 2021 | | Environmental Specialist of SC Mr. Rezo E nukidze | Regular monitoring of sites | Road reinstatement works should be carried out in Avarioni area. | Verbal instruction was given to contractor to immediately improve the situation. Non-Compliance Notice was issued and is presented in Annex C of this report. | Partially Completed, the full rehabilitation of streets will be implemented after completion of construction activities in January 2022 |
| 3 November 2021 | | Environmental Specialist of SC Mr. Rezo E nukidze USIIP Environmental Specialist Ms.Kate Chomakhidze | Regular monitoring of sites | The contractor shall complete activities which are abandoned and cause public inconvenience and are safety hazards. The contractor shall ensure that all workers are conducted in a safe manner and works are provided with safety equipment and supervised by H&S personal | Verbal instruction was given to contractor to immediately improve the situation. Non-Compliance Notice was issued and is presented in Annex C of this report. (Photo-documentations are | Completed in November 2021 Completed in November 2021 |



| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|------------------|---|--|-----------------------------|--|---|---|
| | | | | . | presented in Annex C, non-compliance note, 3 November 2021) | |
| 16 November 2021 | | Environmental Specialist of SC Mr. Rezo Ehlukidze | Regular monitoring of sites | <p>Occupational safety issues must be taken into consideration, during the visit it observe that some excavations at narrow streets are barricaded only with safety tapes light barricades, please see Photo N1 below</p> <p>Photo N1</p>  <p>Proper signage at the narrow streets should be arranged to provide proper barricades</p> | <p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex C of this report.</p> | <p>Completed, December 2021</p> <p>Completed, December 2021</p> |



| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|------------------|---|--|-----------------------------|--|---|---|
| 17 November 2021 | | <p>Environmental Specialist of SC Mr. Rezo Ehlukidze</p> <p>USIIP Environmental Specialist Ms.Kate Chomakhidze</p> <p>Site visit was attended by the Head of the Department of Environmental Protection and Permits Ms.Maka Goderdzishvili</p> | Regular monitoring of sites | <p>Provide warning signs or safety tapes around open trenches (Please see Photo N1)</p> <p>Photo N1</p>  <p>The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas</p> | <p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Explanatory Note was issued and is presented in Annex D of this report.</p> <p>(Photo-documentations are presented in Annex D, 17 November 2021)</p> | <p>Completed, December 2021</p> <p>Corrective Action Plan was developed and improved photos of sites was sent by contractor, please see Photo N1</p>  <p>Partially Completed, December 2021</p> |


| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---------------|---|---------------|------------------|--|---------------------|---|
| | | | | <p data-bbox="1099 277 1227 304">Photo N2</p>  <p data-bbox="1099 635 1485 1007">All construction material should be properly segregated and stored adequately in proper waste (Hazardous Household) containers with roof & should be installed at the storage area, waste should be placed only at the proper waste container, please see Photo N1</p> <p data-bbox="1099 1043 1227 1070">Photo N1</p>  | | <p data-bbox="1827 852 2098 916">Completed in December 2021</p> |



| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|--|--|---|---|--|--|---|
| | | | | <p>Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination.</p> <p>Concrete wash out pit should be arranged at construction site, spoiled soil should be immediately removed from the site.</p> | | <p>Completed in December 2021</p> <p>Completed in December 2021</p> |
| <p>Continuously during reporting period (July-December 2021)</p> <p>GPC Coordinates:</p> | <p>Toshiba Water Solutions Pvt. Ltd and IN-SI LLC</p> <p>MAR-02</p> | <p>Environmental, H&S Specialist of Contractor</p> <p>Mr. Guram Tandilashvili</p> | <p>Day to day monitoring of sites</p> <p>Compliance with Environmental and HES requirements</p> | <p>Safety issues on construction sites, Workers always should use complete set of PPE.</p> | <p>Prepare Monthly Environmental Monitoring Reports and send to SC</p> | <p>Performed monthly during the reporting period</p> |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|----------------------------|---|--|---|--|--|---|
| X 44.840296 Y 41.465192 | | | | | | |
| 08.11.2021 | | Environmental Specialist of Supervision Consultant HILL Mr.Rezo E nukidze | Regular Environmental monitoring of sites | <p>Waste Soil is dumped along the access road, according to SSEMP it should be removed, but based on the local population information this soil at the moment is protecting their property from flooding.</p> <p>Flooding may destroy site surroundings and in case if during this year similar to last year flooding will have place it is possible that site itself will be flooded. At the same time Client was requested to consider retaining wall along the channel to protect locals from possible flooding</p> <p>Access to the stored soil must be restricted and additional explanations to locals must be done. Also, it is possible to inform local municipality that illegal waste area has appeared/</p> | <p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex C of this report.</p> <p>(Photo-documentations are presented in Annex C, non-compliance note, 8 November 2021)</p> | <p>Completed in December 2021</p> <p>Completed in December 2021</p> <p>Completed in December 2021</p> <p>Completed in</p> |


| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|---------------|------------------|---|---------------------|--|
| | | | | <p>Waste containers used by Contractor must be regularly emptied.</p> <p>Remaining from Concrete washing pit is excavated, but it there is no information that it was disposed according to WMP; Seems lots of concrete works are ahead proper concrete washing pit must be organized</p> <p>Storage area for hazardous waste handling is prepared, but it is not managed properly, please see Photo No1</p> <p>Photo N1:</p>  <p>Not properly segregated waste is observed in the</p> | | <p>December 2021, please see improved photo of site, Photo N1</p>  <p>Also, Annex E, Corrective Action Plan</p> <p>Completed in December 2021</p> <p>Completed in November 2021</p> <p>Completed in December 2021, please see</p> |


| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|---------------|------------------|---|---|---|
| | | | | <p>project area, please see Photo No2</p> <p>Photo N2</p>  <p>Housekeeping have to be improved.</p> <p>Smoking areas are marked, but they are not used, cigarette packs and butts are thrown all around the site.</p> <p>Additional training on this subject is needed.</p> <p>Construction waste possibly dumped by Local population is observed on waste soil along the access road.</p> | | <p>improved photo of site, Photo N2</p>  <p>Also Annex E, Corrective Action Plan.</p> <p>Completed in November 2021.</p> <p>Completed in November 2021.</p> <p>Completed in November 2021.</p> |
| 15.11.2021 | | | | <p>For the materials delivered to the Site, a covered and sheltered storage area protected against external weather conditions, flooding and theft should be</p> | <p>Verbal instruction was given to contractor to immediately improve the situation.</p> | <p>Completed in November 2021</p> |


| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | Implementation Status |
|---------------|---|---------------|------------------|--|---|-----------------------------------|
| | | | | <p>provided as soon as possible.</p> <p>The construction works of the MCC-1 building can be completed quickly and a suitable storage for electrical materials can be provided. Please see relevant Photo N1 below</p>  | <p>Non-Compliance Notice was issued and is presented in Annex C of this report.</p> | <p>Completed in November 2021</p> |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|---|----------------------------------|--|---|--|
| 08.12.2021 | | USIIP Environmental Specialist Ms.Kate Chomakhidze Site visit was attended by the Head of the Department of Environmental Protection and Permits Ms.Maka Goderdzishvili | Monthly Environmental monitoring | Site internally should be better arranged, materials should be better segregated/stored and cleaned regularly, please see Photo #1 Photo N1  Cable should be relocated to avoid any damages on users of power source; Unsafe connection to the power socket should be immediately improved, please see Photo #2. Photo N2 | Verbal instruction was given to contractor to immediately improve the situation. Non-Compliance Notice was issued and is presented in Annex C of this report. (Photo-documentations are presented in Annex C, non-compliance note, 8 December 2021) | Completed in December 2021, please see improved photo of site below Photo N1  Completed in December 2021, please see improved photo of site below Photo N1 |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|---------------|------------------|---|---------------------|--|
| | | | |  <p>Concrete wash out pit should be arranged at construction site, spoiled soil should be immediately removed from the site Photo #3 Photo N3</p>  <p>Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be stored at the construction</p> | |  <p>Completed in December 2021, please see improved photo of site below Photo N1</p>  <p>Completed in December 2021</p> |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|---------------|------------------|---|---------------------|--|
| | | | | <p>site to avoid soil contamination, please see Photo N4</p> <p>Photo N4</p>  <p>Top Soil should be stored properly (height of the top soil should not exceed 2 m) in requested amount, and managed in accordance with the required regulations please see Photo N5.</p> <p>Photo N5</p> | | <p>Partially Completed in December 2021, contractor is given strong instruction to improve the situation and provide improved photos of sites by the mid-January 2022.</p> |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | ¹ Implementation Status |
|---------------|---|---------------|------------------|---|---------------------|------------------------------------|
| | | | |  | | |

| Date of Visit | Name of Company Name of Contract | Auditors Name | Purpose of audit | Summary of any Significant Findings | Implemented Actions | 'Implementation Status |
|---------------|---|--|---|---|---|--|
| 15.12.2021 | | Environmental Specialist of Supervision Consultant HILL Mr.Rezo E nukidze | Regular Environmental monitoring of sites | <p>According to SSEMP and project requirements location of the temporary dump site of the sub-soil had to be agreed with engineer.</p> <p>Prior to dumping top soil had to be removed. Only after removal and proper storage of top soil temporary dumping of sub-soil should allowed. Please see photo N1 below.</p> <p>Photo N1:</p>  <p>Storage is used by the project must be properly marked and warning signs must be provided at the location.</p> | <p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex C of this report.</p> <p>(Photo-documentations are presented in Annex C, non-compliance note, 15 December 2021)</p> | <p>Partially Completed deadline for improvement is given until the end of January 2022</p> <p>Completed, December 2021</p> |

3.3 Issues Tracking (Based on Non-Conformance Notices)

47. Non-Conformances have been observed during the site visits under CHI-01 and MAR-02 sub-projects. The contractors were always informed on the detected non-conformances and were demanded to improve on the deadline set and send photos of improvements. Environmental team of HILL and UWSCG/USIIP monitored the improvements during the next monitoring visits. Non-compliances issued under CHI-01 and MAR-02 sub-projects are presented in table 12 above and Annex C of this report. Corrective action plans were developed by contractors and improved photos of sites were sent to UWSCG.
48. A summary of the identified environmental issues for July-December 2021 under CHI-01 sub-project is presented in Table 10 below.
49. There is one open issues under CHI-01 sub-project. Top Soil should be removed and stored properly in requested amount, and managed in accordance with the required regulations.

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

| | |
|--|-----------|
| Total Number of Issues for Project | 12 |
| Issues Opened This Reporting Period | 1 |
| Issues Closed This Reporting Period | 11 |
| Percentage Closed | 92% |

50. A summary of the identified environmental issues for July-December 2021 under MAR-02 sub-project is presented in Table 11 below.

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

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

51. There is one open issues under MAR-02 sub-project, as contractor has improved most of the non-compliances during the reporting period. Non-compliance that still needs improvement is as follows: Top Soil should be stored properly in requested amount, and managed in accordance with the required regulations.

Pending non-compliances under MAR-01 Sub-project and Implemented Measures

52. As it was mentioned above despite the fact that there is no on-going activities under MAR-01 sub-project, there are some pending environmental and social issues which should be solved adequately. These issues include (i) The restoration of asphalt pavement after laying of trenches in the city center presents a driving hazard and a community annoyance; (ii) proper fencing of the Jandari reservoir; (iii) There is a dangerous of moving land on the upper perimeter of the Jandari reservoir; (iv) Fencing of City reservoir.
53. Due to the fact that Akelik does not fulfill its duties under the Contract and despite the numerous requests of the engineer and the UWSCG does not observe safety measures on the reservoirs (Jandari and City) and the contract for the Construction of Water Supply and Sewerage Systems in Marneuli and the Construction of a Sewerage System and a Collector in Bolnisi (USSIP / T6) is under termination, therefore the UWSCG should solve the problem with the local population living in the immediate vicinity of the Jandari and City reservoirs and ensure their safe living conditions.
54. Proposed works for Jandari and City Reservoir area is as following: Supply and installation of fencing, including poles with concrete foundation, 2 doors with security closing device.
- Estimated quantities are provided below:
 - Fencing of Jandari reservoir
 - Fencing of the construction area = 380 m
 - Fencing of City reservoir
 - Fencing of the construction area = 540 m
55. Taking into account the tender procedures, the conclusion of the contract and the time required for the construction works, it is assumed that an approximate time for improvements - is Q1 of 2022.

3.4 Trends

56. Summary of identified trends under CHI-01 and MAR-02 sub-projects during the reporting period – July-December 2021 is presented in the Table 12 below.

Table 12: Summary of identified trends in environmental issues

| Semi-Annual EMR No | Total No of Issues | % issues Closed | % issues closed late |
|--------------------|--------------------|-----------------|----------------------|
| January-June 2021 | 56 | 99% | 1% |
| July-December 2021 | 33 | 94% | 6% |

57. As it was already mentioned above all EH&S issues still opened under the CHI-01 and MAR-02 sub-projects are presented in the table 20 below. Deadlines for improvement of situation are indicated mid-January 2022. The Summary of identified trends under CHI-01 and MAR-02 sub-projects during the reporting period – July-December 2021 is presented in the Table 13 above.

3.5 Unanticipated Environmental Impacts or Risks

58. During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers, however, IPMO, SC and CC have taken all appropriate measures to minimize this risk. These measures, inter alia, included updating the relevant SEMP by the contractor, developing emergency management plan by SC, etc. More details are provided in paragraphs 30-35 above.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

59. During the reporting period Environmental measurements of Noise level and ambient air Quality were carried out by contractor under MAR-02 sub-project.

60. Noise standards defined by IFC/WHO 1999, are presented in the Table 13 below.

Table 13: Noise Level Guidelines

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

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

Table 14: Air pollution Guidelines

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

| Contaminants | IFC/WHO Guideline Value (Limit) mg/m ³) |
|--------------|--|
| 1 | 2 |
| Aldehyde | n/a |

62. During the reporting period, environmental quality measurements were not carried out within the framework of CHI-01 sub-project, therefore ES UWSCG / USIIP asked SC to issue a non-compliance notice to the contractor to ensure that environmental quality measurements are carried out during the next reporting period (January 2022) and provide the measurement data to UWSCG.
63. During the reporting period, measurements of ambient air quality, noise and vibration within the framework of the MAR-02 subproject were carried out by the contractor in September 29, 2021. The results of the measurement are presented in the Table 16 and Table 16 below and in Annex A to this report.
64. Below are shown average air pollution concentration data, measured on 29 September 2021 in 20 minutes interval in Marneuli WWTP Construction site. As the results showed, the average dust concentration was not exceeded the limit. However, in some samples (please see annex A) the level of dust concentration significantly exceeds the permissible norm (for example, September 28, 2021, 15:59 - 624 µg / m³). This increase is due to the movement of trucks, which is accompanied by a sharp increase in dust concentration.

Table 15: Environmental quality measurements results MAR-02, July-December 2021

| # | Place of measurement | Coordinates | Results | |
|---|---|---------------------------|--|--|
| | | | PM2.5 µg/m ³ 24 hours | PM10 µg/m ³ 24 hours |
| | National Environmental Standard (Maximum Permissible Level) and WHO Standards | | 25 (WHO) | 50 (WHO) 50 (National Regulations) |
| 1 | Marneuli WWTP | X 486672 Y 4590385 | 7,6 | 16,5 |

65. Below are shown average noise level, measured on 29 September 2021 in 2 hours interval in Marneuli WWTP Construction site and nearest residential house, detailed measurement data is presented in Annex C to this report. According measurement data of 29 September 2021 noise level exceed the standards of the National Regulations and World Health Organization (IFC/WHO),1999 in Marneuli WWTP construction site and therefore additional mitigation measures are required. IFC/WHO standards for Noise and Air pollution are presented in

Tables 13 and 14 above. Mitigation measures are presented in table 20 below. It should be noted also that environmental quality measurements carried out at the nearest sensitive receptors of construction sites, were temporary and conducted during the daytime from 14:50 am to 17:00pm and no complaints were received from the local population about the noise during the reporting period.

Table 16: Results of Noise measurement in Construction site and the nearest residential house

| # | Location | Coordinates | dBA Results 24 hours | dBA | | dBA | |
|---|---------------------------------|-----------------------|----------------------------|----------------------------|------------------------------|----------------------------|------------------------------|
| | | | | National Regulations | | WHO | |
| | | | | Daytime 07:00- 22:00 | Nighttime 22:00- 07:00 | Daytime 07:00- 22:00 | Nighttime 22:00- 07:00 |
| 1 | Marneuli WWTP | X 486729 Y 4590391 | 57,1 | 55 | 45 | 55 | 45 |
| 2 | Nearest residential house | X 486641 Y 4590350 | 52,2 | | | | |

4.2 Trends

66. All mitigation measures identified within the IEE/EMP, SEMP's under CHI-01 and MAR-02 sub-projects are effective and no additional measures are required.

4.3 Summary of Monitoring outcomes

67. Noise level during the construction period under MAR-02 sub-project exceeded the existing standards of IFC/WHO and therefore additional mitigations measures are required from contractor, those are presented in table 20 below.

4.4 Material resources Utilization

4.4.1 Current Period

68. The following information for material resources utilization was provided by the contractor within the framework of the MAR-02 sub-project during the reporting period July-December 2021.

Table 17: Material Resources Utilized under MAR-02 sub-project

| Item | Quantity (July-December 2021) |
|-------------|-------------------------------|
| Water | 4,00.00 m ³ |
| Electricity | 30,600.00 kw |

69. The contractor didn't provided data on material resources utilization under CHI-01 sub-project. Contractor is strongly requested by IPMO and SC to provide this information for the next reporting period, which will be reflected in the next SAEMR, January-June 2022.

4.4.2 Cumulative Resources Utilization

N/A

4.5 Waste Management

4.5.1 Current Period

70. **CHI-01:** At the construction sites under the CHI-01 sub-project is mainly produced household, construction (inert, surplus soil) and hazardous waste.

71. Mainly household waste is collected in municipal containers. Local municipality is responsible for the disposal of household waste.

72. The local Municipality of Chiatura is responsible for the disposal of household waste under CHI-01 sub-project, LTD "Sanitary" is constructed by contractor "AKKORD" for the disposal of hazardous waste. For disposal of Inert waste, the special place is allocated for contractor which is previously agreed with the Municipality of Chiatura.

73. **MAR-02:** At the construction sites under MAR-02 sub-project mainly household, construction (inert, surplus soil) and hazardous waste are produced.

74. Mainly household waste is collected in municipal containers. Local municipality of Marneuli is responsible for the disposal of household waste under MAR-02 sub-project.

75. LTD "Sanitary" is constructed by contractor for the disposal of hazardous waste. For disposal of Inert waste, the special place is allocated for contractor which is previously agreed with the Municipality of Marneuli.

Table 18: Material Resources Utilized under MAR-02 sub-project

| Item | Monthly |
|-----------------|------------------|
| Household waste | 10m ³ |

4.5.2 Cumulative Waste Generation

Not yet applicable.

4.6 Health and Safety

4.5.1 Community Health and Safety

76. No community incidents have been reported by SC during reporting period under CHI-01, MAR-01 and MAR-02 sub-projects.

4.5.2 Worker Safety and Health

CHI-01

77. Environmental H&S specialist of contractor under CHI-01 sub-project Mr. Tengo Kalmakhelidze was performing day-to-day monitoring of Health & Safety on the Sites and press the Contractor to improve the provision of trench barriers in roads and to provide suitable work boots for the labour force.

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

- Ground works;
- Manual works;
- Removal waste;
- PPE;
- Housekeeping;
- Reinforcement;
- Upgrade Safety Hard and Warning Barricade

79. Despite the fact that SC and UWSCG / USIIP strictly requested from contractor to adequately fill the Near Misses forms and reflect in their monthly monitoring reports no Near Misses were reported by contractors under CHI-01 sub-project. IPMO and SC ensure that the Contractor takes a proactive approach to improving environmental management, including completing Near missis forms and reporting them in monthly reports. Discussions will be continued and the filled Near Misses will be provided in the next SAEMR, January-June 2022.

80. During July-December 2021 reporting period no incidents and accidents have been fixed.

MAR-02

- 81.** Environmental H&S specialist of contractor under MAR-02 sub-project Mr. Guram Tandilashvili was performing day-to-day monitoring of Health & Safety on the Sites and press the Contractor to improve the provision of trench barriers in roads and to provide suitable work boots for the labour force.

- 82.** Health & safety and environment issues which were covered during the reporting period are as follows:
 - PPE;
 - Ground works;
 - Manual works;
 - Housekeeping;
 - Reinforcement;
 - Upgrade Safety Hard and Warning Barricade

- 83.** During the reporting period, no Near-Misses were identified by contractor within the framework of the MAR-02 subproject.

- 84.** SC and UWSCG / USIIP strictly requested from contractor to adequately fill the Near Misses forms and reflect in their monthly monitoring reports.

- 85.** Additional meetings will be conducted with the contractor and minutes of meetings will be presented in the next SAEMR, January-June 2022.

4.7 Training

- 86.** On site environmental and H&S safeguard training were conducted for environmental team of MAR-02 and CHI-01 sub-projects on a regular basis. Environmental specialists of contractors were introduced with all necessary safeguard requirements of ADB/SPS 2009.

- 87.** COVID-19 workplace safety trainings were carried out as well to reduce the potential for COVID-19-related illness including education of employees on hygiene, face-covering and cleaning measures needed to prevent the virus from. SC is requested to closely monitor Contractors' implementation of COVID-19 prevention measures and provide more evidences and photo materials of anti-COVID measures implementation.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review (prepared and updated under USIIP/T6, including CHI-01, MAR-01 and Mar-02 sub-projects)

88. The SEMP for Chiatura's water supply network was prepared and approved in January 2020 and further updated and approved during the reporting period, in August 2020 due to changes in the project design.

89. The following SEMPs have been prepared and approved under CHI-01 and MAR-01 sub-project during the previous reporting periods:

CHI-01 Sub-project:

- SEMP for CAMP site (approved in August 2018)
- SEMP for Sachkhere Reservoir (approved in August 2018);
- SEMP for Bisi Reservoir (approved in September 2018);
- SEMP for Lezhubani Reservoir (approved in September 2018);
- SEMP for Navardzeti Reservoir (approved in September 2018);
- SEMP for Perevisy Reservoir (approved in September 2018);
- SEMP for Rustaveli reservoir (approved in September 2018);
- SEMP for Tekhisa Reservoir (approved in September 2018);
- SEMP for Chiatura Well fields (approved in November 2018)
- SEMP for Chiatura Water Supply components (Avarioni&Sapari) (Approved in 10 August 2020)

90. The following SEMPs have been updated due to the changes in project design under CHI-01 sub-project.

- SEMP for Sachkhere reservoir (December 2019)
- SEMP for Bisi Reservoir (December 2019)

MAR-01 sub-project:

- SEMP for Jandary Reservoir (approved in March 2019)
- SEMP for Kolagiri Pumping Station (approved in March 2019);
- SEMP for CAMP (approved in May 2019)
- SEMP for City Reservoir

MAR-02 sub-project:

- SSEMP for MAR-02 (approved in March 2020).

91. All SEMPs were prepared by Contractor, endorsed by SC and approved by UWSCG. SEMPs were reviewed/commented by the RETA International Environmental Consultant of ADB under RETA 9541 - Ms. Ketii Dgebuadze.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

- 92.** There is need to improve close monitoring, guidance and interactions between IPMO, consultant supervision team and contractors to avoid non-conformances and improve current situations in order to improve the tracking of actions to address non-conformances under USIIP/T6 sub-projects.

6.2 Opportunities for Improvement

- 93.** During the next the reporting period the tracking of actions to address non-conformances will be improved by IPMO. Close monitoring, guidance and interactions between PIU, SC and CC will be improved to avoid non-conformances and improve current situations. All non-conformances addressed will be reflected in the next SAEMR, January-June 2022.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

94. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC, Mr. Rezo Enukidze and Environmental Specialist of USIIP Ms. Ketevan Chomakhidze.
95. Due to the fact that The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic the Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) which applies to all sectors of economic activity (Annex F).
96. The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector.
97. This Guidance for Construction Activities during the COVID-19 was created to provide owners/operators of construction projects and their employees and contractors with precautions to help protect against the spread of COVID-19 as indoor and outdoor construction sites.
98. An emergency response plan was developed by SC for preventions of employees workers against the COVID-19 as well.
99. In accordance with the IEE, the Contractor was required to undertake parametric measurements and observations on air quality and noise under MAR-02 sub-project.
100. No Environmental Quality Measurement was conducted under CHI-01 sub-project. SC is strongly required to follow environmental safeguard requirements under USIIP/T6 and request from contractor to conduct EQM in January 2022.
101. Environmental quality measurements of ambient air pollution and noise level was conducted under MAR-02 sub-project. Noise level exceeded the existing standards of national and international regulations and therefore additional mitigation measures to improve the situation are provided in the Table 20 below.
102. Table 19 below provides information on the implementation Status of Corrective Actions proposed in the previous SAEMR, July-December 2020.

Table 19: Implementation Status of Corrective Actions proposed in the last environmental monitoring report (July-December 2021)

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| CHI-01 | | | | | | |
| 1 | Reinstatement of tranches after completion of construction works | Road reinstatement works should be carried out in Avarioni area. | CC | January 2022 | Partially Completed, the full rehabilitation of streets will be implemented after completion of construction activities in January 2022 | Additional actions required |
| | | Abandoned, unfinished construction activities were observed during the site visit. Roads are not reinstated; materials are | CC | August 2021 | Completed in August 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|------------------------------------|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | | left in the street. | | | | |
| 2 | Noise Impacts on nearby Population | The Contractor shall complete activities, which are abandoned and might cause complaints from locals | CC | August 2021 | Completed in August 2021 | No further actions required |
| 3 | Public & Worker Safety | The contractor shall ensure that all workers are conducted in a safe manner and works are provided with safety equipment and supervised by H&S personal | CC | November 2021 | Completed in November 2021 | No further actions required |
| 4 | Public & Worker Safety | Occupational safety issues must be taken into consideration, during the visit it observe that some excavations at narrow streets are barricaded only with safety tapes light | CC | December 2021s | Completed, December 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|---|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | | barricades | | | | |
| 5 | Disturbance of nearby population | Proper signage at the narrow streets should be arraigned to provide proper barricades | CC | November 2021 | Completed, December 2021 | No further actions required |
| | | Provide warning signs or safety tapes around open tranches | | | | |
| 6 | Loss of topsoil due to incorrect stripping and storage | The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas | CC | December 2021 | Partially Completed, December 2021, will be finalized in January 2022 | No further actions required |
| 7 | Storage territory | All construction material should be properly | CC | December | Completed in December | No further actions |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | internally should be arranged properly and cleaned regularly. | segregated and stored adequately in proper waste (Hazardous Household) containers with roof & should be installed at the storage area | | 2021 | 2021 | required |
| 8 | Leakage of Equipment & vehicles on construction sites | Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to avoid leakage and ground contamination | CC | December 2021 | Completed in December 2021 | No further actions required |
| 9 | Inert waste management, Concrete Mixer Trucks Washout activities | Concrete wash out pit should be arranged at construction site, spoiled soil should be immediately removed from the site | CC | December 2021 | Completed in December 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|------------------------------------|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| MAR-02 | | | | | | |
| 1 | Incorrect surplus/waste management | Waste Soil is dumped along the access road, according to SSEMP it should be removed, but based on the local population information this soil at the moment is protecting their property from flooding | CC | November 2021 | Completed in December 2021, retaining wall was constructed to protect locals from possible flooding | No further actions required |
| 2 | Safety of Public | Flooding may destroy site surroundings and in case if during this year similar to last year flooding will have place it is possible that site itself will be flooded. At the same time Client was requested to consider retaining wall along the channel to protect locals | CC | December 2021 | Completed in December 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | | from possible flooding | | | | |
| 3 | Safety of Public | Access to the stored soil must be restricted and additional explanations to locals must be done. Also it is possible to inform local municipality that illegal waste area has appeared | CC | December 2021 | Completed in December 2021 | No further actions required |
| 4 | Waste management | Waste containers used by Contractor must be regularly emptied | CC | December 2021 | Completed in December 2021 | No further actions required |
| 5 | Reinstatement of construction area after construction activities | Remaining from Concrete washing pit is excavated, but it there is no information that it was disposed according to WMP; Seems lots of concrete works are ahead proper concrete washing | CC | December 2021 | Completed in December 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|---|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | | pit must be organized | | | | |
| 6 | Waste management | Storage area for hazardous waste handling is prepared, but it is not managed properly | CC | November 2021 | Completed in November 2021 | No further actions required |
| 7 | Waste management | Not properly segregated waste is observed in the project area | CC | November 2021 | Completed in November 2021 | No further actions required |
| 8 | Proper housekeeping of construction sites | Housekeeping have to be improved | CC | November 2021 | Completed in November 2021 | No further actions required |
| 9 | Proper housekeeping of construction sites | Smoking areas are marked, but they are not used, cigarette packs and butts are thrown all around the site. | CC | November 2021 | Completed in November 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|------------------------------------|---|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| 10 | Capacity building of workers | Additional training on this subject is needed | CC | November 2021 | Completed in November 2021 | No further actions required |
| 11 | Waste management | Construction waste possibly dumped by Local population is observed on waste soil along the access road | CC | November 2021 | Completed in November 2021 | No further actions required |
| 12 | Noise Impacts on nearby Population | For the materials delivered to the Site, a covered and sheltered storage area protected against external weather conditions, flooding and theft should be provided as soon as possible. | CC | November 2021 | Completed in November 2021 | No further actions required |
| 13 | Public & Worker | The construction works of the MCC-1 building can be | CC | November | Completed in November | No further actions |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|---|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | Safety | completed quickly and a suitable storage for electrical materials can be provided. Please see relevant | | 2021 | 2021 | required |
| 14 | Proper housekeeping on construction site | Site internally should be better arranged, materials should be better segregated/stored and cleaned regularly, please see | CC | December 2021 | Completed in December 2021 | No further actions required |
| 15 | Public & Worker Safety | Cable should be relocated to avoid any damages on users of power source; Unsafe connection to the power socket should be immediately improved | CC | December 2021 | Completed in December 2021 | No further actions required |
| 16 | Inert waste management, Concrete | Concrete wash out pit should be arranged at construction site, spoiled | CC | December 2021 | Completed in December 2021 | No further actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|--|---|----------------|-----------------------|--|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | Mixer Trucks Washout activities | soil should be immediately removed from the site | | | | |
| 17 | Fuel spills | Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be stored at the construction site to avoid soil contamination | CC | December 2021 | Completed in December 2021 | No further actions required |
| 18 | Loss of topsoil due to incorrect stripping and storage | Top Soil should be stored properly in requested amount, and managed in accordance with the required regulations | CC | December 2021 | Partially Completed in December 2021, contractor is given strong instruction to improve the situation and provide improved photos of sites | Additional actions required |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | If not yet resolved, indicate the reason why and specify further required action and timeframe. |
|-------------------------------|---|--|----------------|-----------------------|---|---|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | | | | | by the mid. January 2022 | |
| 19 | Public & Worker Safety | Storage are used by the project must be properly marked and warning signs must be provided at the location. | CC | December 2021 | Completed, December 2021 | No additional actions required |
| 20 | Incorrect surplus/waste soil management | According to SSEMP and project requirements location of the temporary dump site of the sub-soil had to be agreed with engineer | CC | December 2021 | Partially Completed deadline for improvement is given until the end of January 2022 | Additional actions required |
| MAR-01 | | | | | | |
| | Public Safety | Fencing of Jandari reservoir | UWSCG | Q1, 2022 | Q1, 2022 | Additional actions are required to be implemented by UWSCG |

| # | Issue | Required Action | Responsibility | Timing (Target Dates) | Description of Resolution and Timing (Actual) | <i>If not yet resolved, indicate the reason why and specify further required action and timeframe.</i> |
|-------------------------------|---------------|---------------------------|----------------|-----------------------|---|--|
| CHI-01, MAR-02, MAR-01 | | | | | | |
| | Public Safety | Fencing of City reservoir | UWSCG | Q1, 2022 | Q1, 2022 | Additional actions are required to be implemented by UWSCG |

7.2 Recommendations

103. During the reporting period, July-December 2021, the USIIP/T6 was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.
104. More detailed recommendations for the implementation of T6 during the next reporting period July-December 2021 are provided in the Table 20 below:

Table 20: Recommendations to Address Environmental Issues under USIIP/T6 sub-projects

| Recommendations under CHI-01 and MAR-02 sub-projects | |
|---|--|
| Recommendations CHI-01 | Implementation Status and Date |
| Conduct Environmental Quality Measurements of Noise and Air Pollution under CHI-01 sub-project | January 2022 |
| The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas | Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the end of January 2022 |
| Recommendations MOR-02 | Implementation Status and Date |
| Ensure top soil is stripped and stored in a manner to avoid its loss | Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the end of January 2022 |
| The top soil of about 1 ft depth (0.3 m) shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas | Instruction are given to contractor to improve the situation and to conduct following mitigation measures by the end of January 2022 |

Recommendations under CHI-01 and MAR-02 sub-projects

Noise from the construction activities should not cause disruption and nuisance to nearby community and other sensitive receptors (i.e. school, hospitals).

Instruction are given to contractor to improve the situation and to conduct following mitigation measures immediately.

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

Recommendations under CHI-01 and MAR-02 sub-projects

| | |
|--|----------------------------|
| | by the project activities. |
| | |

105. Conduct quarterly monitoring of Noise and Air quality under CHI-01 project at the nearest sensitive receptors. The schedule of environmental quality measurements to be carried out during the next reporting period, January-June 2022 is presented in the Table 21 below.

Table 21: Conduct Monitoring of Environmental Quality under CHI-01 project

| Parameters | Quarterly measurement |
|--|-----------------------|
| Dust | January 2022 |
| PM _{2.5} and PM ₁₀ | January 2022 |
| Vibration | January 2022 |
| Carbon monoxide | January 2022 |
| Nitrogen dioxide | January 2022 |
| Noise | January 2022 |

106. Conduct quarterly monitoring of Noise and Air quality under MAR-02 project at the nearest sensitive receptors. The schedule of environmental quality measurements to be carried out during the next reporting period, January-June 2022 is presented in the Table 22 below.

Table 22: Conduct Monitoring of Environmental Quality under MAR-02 sub-project

| Parameters | Quarterly measurement |
|--|-----------------------|
| Dust | February 2022 |
| PM _{2.5} and PM ₁₀ | February 2022 |
| Vibration | February 2022 |
| Carbon monoxide | February 2022 |
| Nitrogen dioxide | February 2022 |
| Noise | February 2022 |

ANNEXES

ANNEX A: ENVIRONMENTAL QUALITY MEASUREMENT DATA

Environmental Quality Measurement Data (MAR-02), 29 September 2021, Air Pollution

(a)

Note. Below are shown air pollution measurements in every 20 minutes and the averaged data in every 20-minute interval. As the results showed, the dust concentration was not exceeded the limit. However, in some samples, the level of dust concentration significantly exceeds the permissible norm (for example, September 28, 2021, 15:59 - 624 $\mu\text{g} / \text{m}^3$). This increase is due to the movement of trucks, which is accompanied by a sharp increase in dust concentration.



სამერთაშორისო საკონსულტაციო და სერტიფიკაციის ცენტრი
INTERNATIONAL CONSULTING AND CERTIFICATION CENTER

შენიშვნა: ქვემოთ წარმოდგენილია გაზომვის წუთობრივი მონაცემები, ასევე 20 წუთიანი ინტერვალის საშუალო მონაცემები. როგორც, შედეგებმა აჩვენა, 20 წუთიანი ინტერვალში მტვრის დონის ნორმაზე გადაჭარბება არ ფიქსირდება. თუმცა, რამდენიმე სინჯში მტვრის კონცენტრაციის დონე მნიშვნელოვნად აღემატება დასაშვებ ნორმას (მაგ.: 28 Sep 2021 15:59 - 624 მკგ/მ³). აღნიშნული მატება განპირობებულია სატვირთო მანქანების გადაადგილებით, რასაც ახლავს მტვრის კონცენტრაციის მკვეთრი მატება.

| ინდექსი | თარიღი / დრო | მონიტორის ID | ლოკაციის ID | PM 10 (მკგ/მ ³) | PM 2.5 (მკგ/მ ³) |
|-----------------------------------|-------------------|--------------|-------------|-----------------------------|------------------------------|
| 1 | 28 Sep 2021 14:59 | 1 | 1 | 8 | 2 |
| 2 | 28 Sep 2021 15:00 | 1 | 1 | 15 | 4 |
| 3 | 28 Sep 2021 15:01 | 1 | 1 | 93 | 11 |
| 4 | 28 Sep 2021 15:02 | 1 | 1 | 12 | 6 |
| 5 | 28 Sep 2021 15:03 | 1 | 1 | 15 | 4 |
| 6 | 28 Sep 2021 15:04 | 1 | 1 | 32 | 19 |
| 7 | 28 Sep 2021 15:05 | 1 | 1 | 44 | 47 |
| 8 | 28 Sep 2021 15:06 | 1 | 1 | 47 | 42 |
| 9 | 28 Sep 2021 15:07 | 1 | 1 | 26 | 25 |
| 10 | 28 Sep 2021 15:08 | 1 | 1 | 42 | 41 |
| 11 | 28 Sep 2021 15:09 | 1 | 1 | 11 | 5 |
| 12 | 28 Sep 2021 15:10 | 1 | 1 | 12 | 4 |
| 13 | 28 Sep 2021 15:11 | 1 | 1 | 11 | 4 |
| 14 | 28 Sep 2021 15:12 | 1 | 1 | 10 | 3 |
| 15 | 28 Sep 2021 15:13 | 1 | 1 | 59 | 51 |
| 16 | 28 Sep 2021 15:14 | 1 | 1 | 6 | 2 |
| 17 | 28 Sep 2021 15:15 | 1 | 1 | 5 | 3 |
| 18 | 28 Sep 2021 15:16 | 1 | 1 | 4 | 3 |
| 19 | 28 Sep 2021 15:17 | 1 | 1 | 4 | 3 |
| 20 | 28 Sep 2021 15:18 | 1 | 1 | 4 | 3 |
| 20 წუთის საშუალო მონაცემი: | | | | 23 | 14,1 |
| 21 | 28 Sep 2021 15:19 | 1 | 1 | 21 | 11 |
| 22 | 28 Sep 2021 15:20 | 1 | 1 | 22 | 16 |
| 23 | 28 Sep 2021 15:21 | 1 | 1 | 34 | 23 |
| 24 | 28 Sep 2021 15:22 | 1 | 1 | 5 | 3 |
| 25 | 28 Sep 2021 15:23 | 1 | 1 | 42 | 5 |
| 26 | 28 Sep 2021 15:24 | 1 | 1 | 95 | 51 |
| 27 | 28 Sep 2021 15:25 | 1 | 1 | 18 | 4 |
| 28 | 28 Sep 2021 15:26 | 1 | 1 | 6 | 3 |
| 29 | 28 Sep 2021 15:27 | 1 | 1 | 6 | 3 |
| 30 | 28 Sep 2021 15:28 | 1 | 1 | 4 | 3 |
| 31 | 28 Sep 2021 15:29 | 1 | 1 | 11 | 3 |
| 32 | 28 Sep 2021 15:30 | 1 | 1 | 11 | 3 |
| 33 | 28 Sep 2021 15:31 | 1 | 1 | 6 | 3 |



| ინდექსი | თარიღი / დრო | მონიტორის ID | ლოკაციის ID | PM 10 (მკგ/მ3) | PM 2.5 (მკგ/მ3) |
|-----------------------------------|-------------------|--------------|-------------|----------------|-----------------|
| 34 | 28 Sep 2021 15:32 | 1 | 1 | 8 | 3 |
| 35 | 28 Sep 2021 15:33 | 1 | 1 | 4 | 3 |
| 36 | 28 Sep 2021 15:34 | 1 | 1 | 14 | 3 |
| 37 | 28 Sep 2021 15:35 | 1 | 1 | 5 | 3 |
| 38 | 28 Sep 2021 15:36 | 1 | 1 | 5 | 3 |
| 39 | 28 Sep 2021 15:37 | 1 | 1 | 9 | 3 |
| 40 | 28 Sep 2021 15:38 | 1 | 1 | 3 | 3 |
| 20 წუთის საშუალო მონაცემი: | | | | 16,5 | 7,6 |
| 41 | 28 Sep 2021 15:39 | 1 | 1 | 6 | 3 |
| 42 | 28 Sep 2021 15:40 | 1 | 1 | 5 | 3 |
| 43 | 28 Sep 2021 15:41 | 1 | 1 | 4 | 3 |
| 44 | 28 Sep 2021 15:42 | 1 | 1 | 5 | 3 |
| 45 | 28 Sep 2021 15:43 | 1 | 1 | 6 | 3 |
| 46 | 28 Sep 2021 15:44 | 1 | 1 | 22 | 4 |
| 47 | 28 Sep 2021 15:45 | 1 | 1 | 7 | 3 |
| 48 | 28 Sep 2021 15:46 | 1 | 1 | 7 | 3 |
| 49 | 28 Sep 2021 15:47 | 1 | 1 | 10 | 3 |
| 50 | 28 Sep 2021 15:48 | 1 | 1 | 10 | 3 |
| 51 | 28 Sep 2021 15:49 | 1 | 1 | 7 | 3 |
| 52 | 28 Sep 2021 15:50 | 1 | 1 | 28 | 5 |
| 53 | 28 Sep 2021 15:51 | 1 | 1 | 5 | 3 |
| 54 | 28 Sep 2021 15:52 | 1 | 1 | 5 | 3 |
| 55 | 28 Sep 2021 15:53 | 1 | 1 | 7 | 3 |
| 56 | 28 Sep 2021 15:54 | 1 | 1 | 8 | 3 |
| 57 | 28 Sep 2021 15:55 | 1 | 1 | 6 | 3 |
| 58 | 28 Sep 2021 15:56 | 1 | 1 | 4 | 3 |
| 59 | 28 Sep 2021 15:57 | 1 | 1 | 23 | 5 |
| 60 | 28 Sep 2021 15:58 | 1 | 1 | 4 | 3 |
| 20 წუთის საშუალო მონაცემი: | | | | 9,0 | 3,3 |
| 61 | 28 Sep 2021 15:59 | 1 | 1 | 624 | 62 |
| 62 | 28 Sep 2021 16:00 | 1 | 1 | 8 | 3 |
| 63 | 28 Sep 2021 16:01 | 1 | 1 | 7 | 3 |
| 64 | 28 Sep 2021 16:02 | 1 | 1 | 8 | 3 |
| 65 | 28 Sep 2021 16:03 | 1 | 1 | 5 | 3 |
| 66 | 28 Sep 2021 16:04 | 1 | 1 | 6 | 3 |
| 67 | 28 Sep 2021 16:05 | 1 | 1 | 9 | 3 |
| 68 | 28 Sep 2021 16:06 | 1 | 1 | 8 | 3 |
| 69 | 28 Sep 2021 16:07 | 1 | 1 | 12 | 3 |
| 70 | 28 Sep 2021 16:08 | 1 | 1 | 53 | 7 |
| 71 | 28 Sep 2021 16:09 | 1 | 1 | 6 | 3 |
| 72 | 28 Sep 2021 16:10 | 1 | 1 | 5 | 3 |



| ინდექსი | თარიღი / დრო | მონიტორის ID | ლოკაციის ID | PM 10 (მკგ/მ3) | PM 2.5 (მკგ/მ3) |
|-----------------------------------|-------------------|--------------|-------------|----------------|-----------------|
| 73 | 28 Sep 2021 16:11 | 1 | 1 | 8 | 6 |
| 74 | 28 Sep 2021 16:12 | 1 | 1 | 13 | 8 |
| 75 | 28 Sep 2021 16:13 | 1 | 1 | 14 | 8 |
| 76 | 28 Sep 2021 16:14 | 1 | 1 | 13 | 5 |
| 77 | 28 Sep 2021 16:15 | 1 | 1 | 12 | 6 |
| 78 | 28 Sep 2021 16:16 | 1 | 1 | 11 | 5 |
| 79 | 28 Sep 2021 16:17 | 1 | 1 | 13 | 7 |
| 80 | 28 Sep 2021 16:18 | 1 | 1 | 13 | 8 |
| 20 წუთის საშუალო მონაცემი: | | | | 42,4 | 7,6 |
| 81 | 28 Sep 2021 16:19 | 1 | 1 | 11 | 6 |
| 82 | 28 Sep 2021 16:20 | 1 | 1 | 8 | 5 |
| 83 | 28 Sep 2021 16:21 | 1 | 1 | 9 | 5 |
| 84 | 28 Sep 2021 16:22 | 1 | 1 | 11 | 5 |
| 85 | 28 Sep 2021 16:23 | 1 | 1 | 70 | 9 |
| 86 | 28 Sep 2021 16:24 | 1 | 1 | 11 | 5 |
| 87 | 28 Sep 2021 16:25 | 1 | 1 | 6 | 4 |
| 88 | 28 Sep 2021 16:26 | 1 | 1 | 5 | 4 |
| 89 | 28 Sep 2021 16:27 | 1 | 1 | 9 | 4 |
| 90 | 28 Sep 2021 16:28 | 1 | 1 | 8 | 4 |
| 91 | 28 Sep 2021 16:29 | 1 | 1 | 68 | 8 |
| 92 | 28 Sep 2021 16:30 | 1 | 1 | 11 | 4 |
| 93 | 28 Sep 2021 16:31 | 1 | 1 | 12 | 6 |
| 94 | 28 Sep 2021 16:32 | 1 | 1 | 13 | 6 |
| 95 | 28 Sep 2021 16:33 | 1 | 1 | 17 | 7 |
| 96 | 28 Sep 2021 16:34 | 1 | 1 | 21 | 7 |
| 97 | 28 Sep 2021 16:35 | 1 | 1 | 11 | 6 |
| 98 | 28 Sep 2021 16:36 | 1 | 1 | 13 | 6 |
| 99 | 28 Sep 2021 16:37 | 1 | 1 | 12 | 6 |
| 20 წუთის საშუალო მონაცემი: | | | | 17,2 | 5,6 |
| 100 | 28 Sep 2021 16:38 | 1 | 1 | 10 | 6 |
| 101 | 28 Sep 2021 16:39 | 1 | 1 | 16 | 9 |
| 102 | 28 Sep 2021 16:40 | 1 | 1 | 15 | 7 |
| 103 | 28 Sep 2021 16:41 | 1 | 1 | 13 | 6 |
| 104 | 28 Sep 2021 16:42 | 1 | 1 | 15 | 9 |
| 105 | 28 Sep 2021 16:43 | 1 | 1 | 12 | 7 |
| 106 | 28 Sep 2021 16:44 | 1 | 1 | 11 | 7 |
| 107 | 28 Sep 2021 16:45 | 1 | 1 | 18 | 8 |
| 108 | 28 Sep 2021 16:46 | 1 | 1 | 14 | 7 |
| 109 | 28 Sep 2021 16:47 | 1 | 1 | 11 | 7 |
| 110 | 28 Sep 2021 16:48 | 1 | 1 | 13 | 8 |
| 111 | 28 Sep 2021 16:49 | 1 | 1 | 12 | 7 |



| ინდექსი | თარიღი / დრო | მონიტორის ID | ლოკაციის ID | PM 10 (მკგ/მ ³) | PM 2.5 (მკგ/მ ³) |
|-----------------------------------|-------------------|--------------|-------------|-----------------------------|------------------------------|
| 112 | 28 Sep 2021 16:50 | 1 | 1 | 15 | 7 |
| 113 | 28 Sep 2021 16:51 | 1 | 1 | 14 | 7 |
| 114 | 28 Sep 2021 16:52 | 1 | 1 | 14 | 8 |
| 115 | 28 Sep 2021 16:53 | 1 | 1 | 17 | 8 |
| 116 | 28 Sep 2021 16:54 | 1 | 1 | 122 | 17 |
| 117 | 28 Sep 2021 16:55 | 1 | 1 | 19 | 7 |
| 118 | 28 Sep 2021 16:56 | 1 | 1 | 15 | 8 |
| 119 | 28 Sep 2021 16:57 | 1 | 1 | 14 | 6 |
| 120 | 28 Sep 2021 16:58 | 1 | 1 | 16 | 7 |
| 20 წუთის საშუალო მონაცემი: | | | | 19,3 | 7,8 |

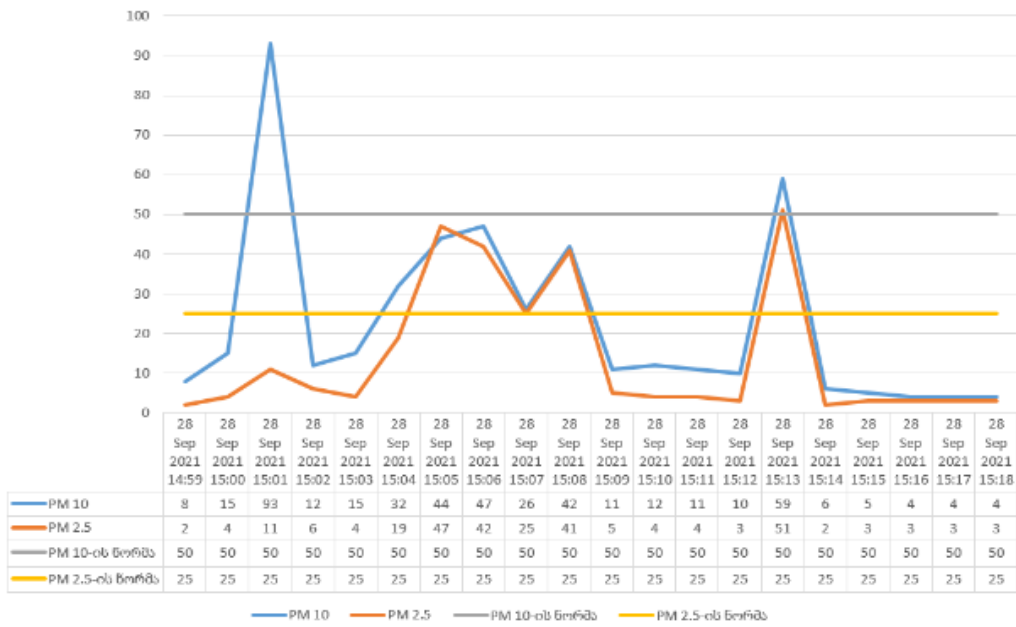
გაზომვის სისწორეზე პასუხისმგებელი პირი:

შ.პ.ს. „ეკო-სპექტრი“-ს
საგამოცდო ლაბორატორიის უფროსი
არჩილ რევაზიშვილი



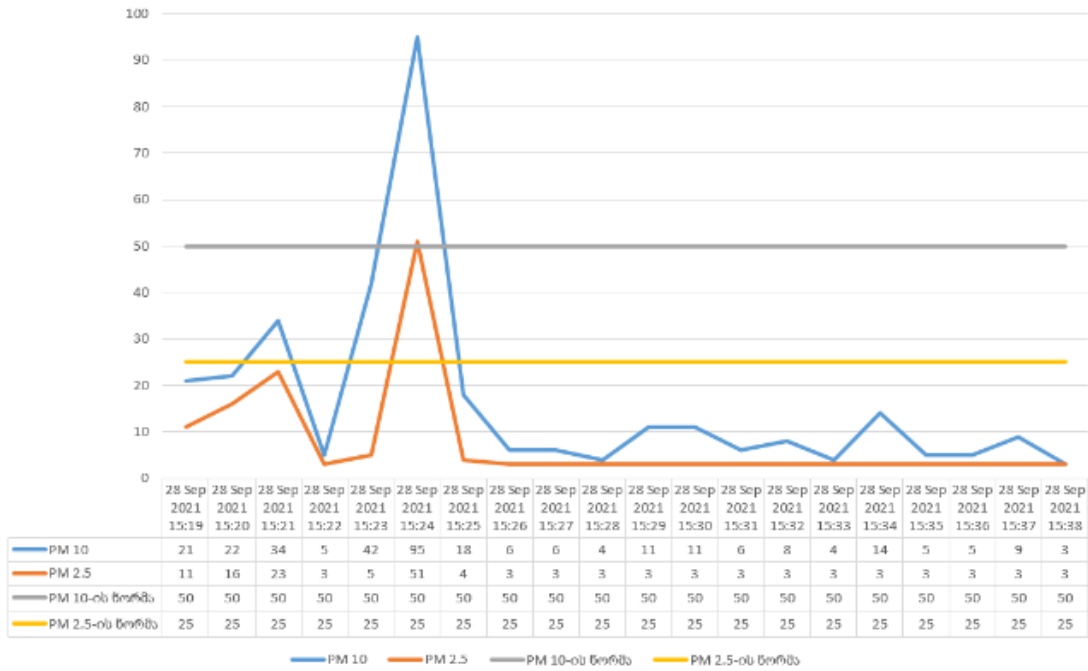


N1 20 წუთიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება



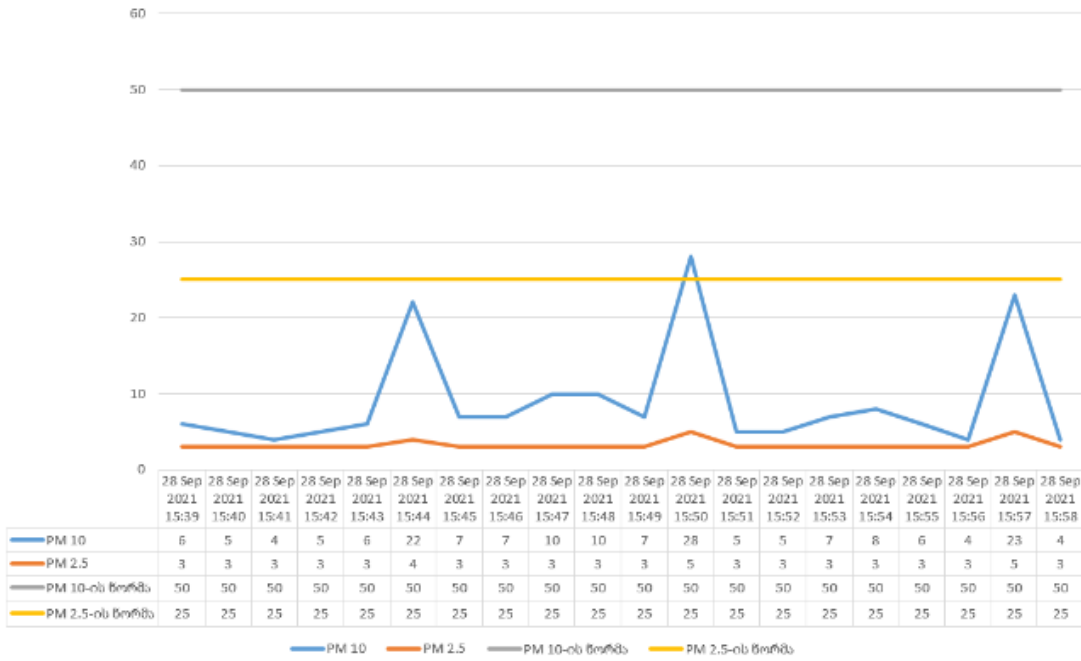


N2 20 წუთიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება



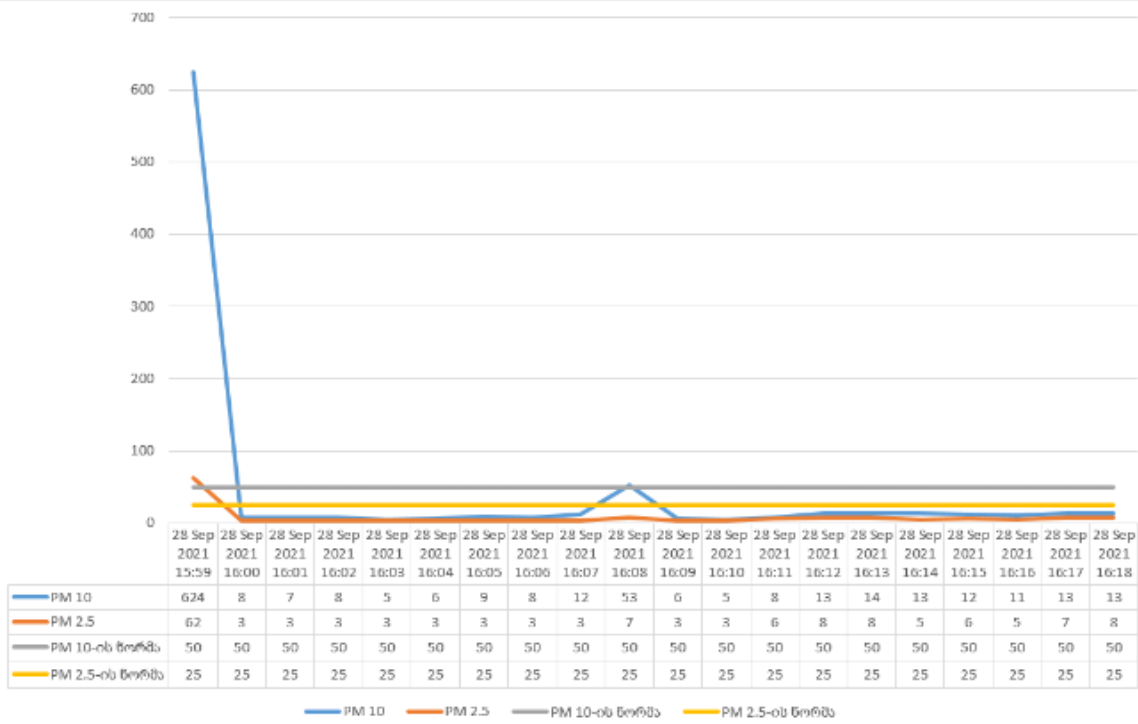


N3 20 წუთიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება





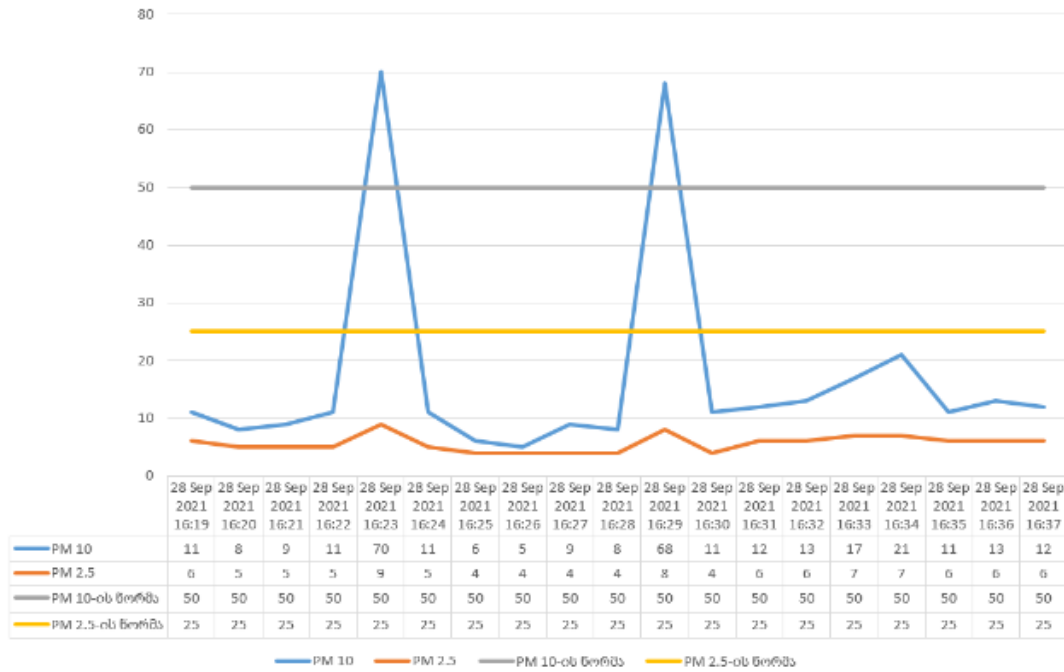
N4 20 წუთიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება



"Eco-Spectri" Ltd
7 Chavchavadze Ave, ent II, room 4 Tbilisi 0179, Georgia.
Tel: +995 322 904422 Fax: +995 322 904639. Mail: info@eco-spectri.com web: www.eco-spectri.com

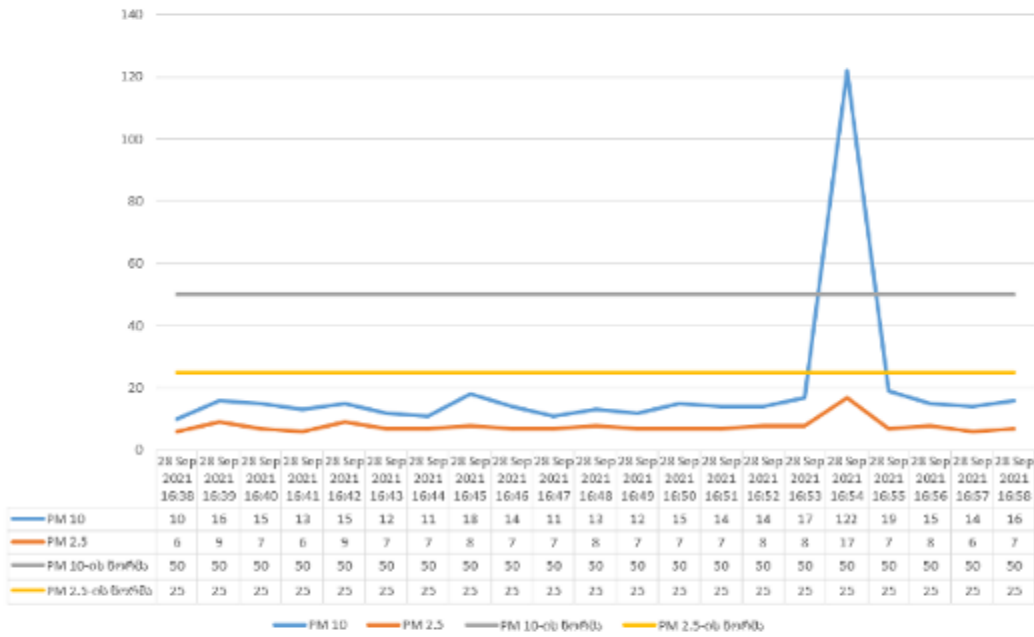


N5 წუთიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება





N6 20 წლიანი ინტერვალის მონაცემების გრაფიკული გამოსახულება



Environmental Quality Measurement Data (MAR-02), 29 September 2021, Noise (b)



შენიშვნა: ქვემოთ წარმოდგენილია ხმაურის გაზომვის შედეგები 2 ლოკაციაზე. ლოკაციების მდებარეობა იხილეთ თანდართულ სურათზე.

| N1 გაზომვა | | |
|-------------------------|------------------|----------------------------|
| თარიღი | ადგილი | დამორეზა ხმაურის წყაროსგან |
| 2021/09/29 - 2021/09/29 | სამშენებლო ეზოში | - |
| N1 გაზომვის შედეგები | | |
| 2 საათის საშუალო | | 57,1 |
| წუთობრივი მონაცემი | | |
| 1 | 28.09.2021 14:50 | 67,4 |
| 2 | 28.09.2021 14:51 | 55,2 |
| 3 | 28.09.2021 14:52 | 68,7 |
| 4 | 28.09.2021 14:53 | 74,4 |
| 5 | 28.09.2021 14:54 | 54,5 |
| 6 | 28.09.2021 14:55 | 56,6 |
| 7 | 28.09.2021 14:56 | 55,8 |
| 8 | 28.09.2021 14:57 | 54,3 |
| 9 | 28.09.2021 14:58 | 52,7 |
| 10 | 28.09.2021 14:59 | 53,2 |
| 11 | 28.09.2021 15:00 | 58,1 |
| 12 | 28.09.2021 15:01 | 56,8 |
| 13 | 28.09.2021 15:02 | 49,5 |
| 14 | 28.09.2021 15:03 | 51,5 |
| 15 | 28.09.2021 15:04 | 49,6 |
| 16 | 28.09.2021 15:05 | 46,9 |
| 17 | 28.09.2021 15:06 | 53,8 |
| 18 | 28.09.2021 15:07 | 54,1 |
| 19 | 28.09.2021 15:08 | 52 |
| 20 | 28.09.2021 15:09 | 56,5 |
| 21 | 28.09.2021 15:10 | 59,7 |
| 22 | 28.09.2021 15:11 | 52,1 |
| 23 | 28.09.2021 15:12 | 54,7 |
| 24 | 28.09.2021 15:13 | 58,5 |
| 25 | 28.09.2021 15:14 | 57,2 |
| 26 | 28.09.2021 15:15 | 55 |
| 27 | 28.09.2021 15:16 | 54,1 |
| 28 | 28.09.2021 15:17 | 53,4 |



| | | |
|----|------------------|------|
| 29 | 28.09.2021 15:18 | 59 |
| 30 | 28.09.2021 15:19 | 62,6 |
| 31 | 28.09.2021 15:20 | 60 |
| 32 | 28.09.2021 15:21 | 60,4 |
| 33 | 28.09.2021 15:22 | 64 |
| 34 | 28.09.2021 15:23 | 64,7 |
| 35 | 28.09.2021 15:24 | 61 |
| 36 | 28.09.2021 15:25 | 67 |
| 37 | 28.09.2021 15:26 | 58,2 |
| 38 | 28.09.2021 15:27 | 60,5 |
| 39 | 28.09.2021 15:28 | 57,3 |
| 40 | 28.09.2021 15:29 | 56 |
| 41 | 28.09.2021 15:30 | 53,3 |
| 42 | 28.09.2021 15:31 | 58,8 |
| 43 | 28.09.2021 15:32 | 54,7 |
| 44 | 28.09.2021 15:33 | 50,5 |
| 45 | 28.09.2021 15:34 | 52 |
| 46 | 28.09.2021 15:35 | 52 |
| 47 | 28.09.2021 15:36 | 55,8 |
| 48 | 28.09.2021 15:37 | 59 |
| 49 | 28.09.2021 15:38 | 50 |
| 50 | 28.09.2021 15:39 | 54,2 |
| 51 | 28.09.2021 15:40 | 58 |
| 52 | 28.09.2021 15:41 | 63,1 |
| 53 | 28.09.2021 15:42 | 64,4 |
| 54 | 28.09.2021 15:43 | 55,4 |
| 55 | 28.09.2021 15:44 | 61,1 |
| 56 | 28.09.2021 15:45 | 53,8 |
| 57 | 28.09.2021 15:46 | 47,5 |
| 58 | 28.09.2021 15:47 | 57,4 |
| 59 | 28.09.2021 15:48 | 60,1 |
| 60 | 28.09.2021 15:49 | 54,1 |
| 61 | 28.09.2021 15:50 | 58,7 |
| 62 | 28.09.2021 15:51 | 59,3 |
| 63 | 28.09.2021 15:52 | 52,2 |
| 64 | 28.09.2021 15:53 | 53,1 |
| 65 | 28.09.2021 15:54 | 57,1 |
| 66 | 28.09.2021 15:55 | 55,6 |
| 67 | 28.09.2021 15:56 | 57,4 |
| 68 | 28.09.2021 15:57 | 60,9 |
| 69 | 28.09.2021 15:58 | 70,7 |
| 70 | 28.09.2021 15:59 | 65,6 |
| 71 | 28.09.2021 16:00 | 58,1 |



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| 72 | 28.09.2021 16:01 | 59,6 |
| 73 | 28.09.2021 16:02 | 52,4 |
| 74 | 28.09.2021 16:03 | 60,1 |
| 75 | 28.09.2021 16:04 | 60,2 |
| 76 | 28.09.2021 16:05 | 50,4 |
| 77 | 28.09.2021 16:06 | 55,8 |
| 78 | 28.09.2021 16:07 | 59,1 |
| 79 | 28.09.2021 16:08 | 62,1 |
| 80 | 28.09.2021 16:09 | 65,1 |
| 81 | 28.09.2021 16:10 | 60,6 |
| 82 | 28.09.2021 16:11 | 50,5 |
| 83 | 28.09.2021 16:12 | 53,4 |
| 84 | 28.09.2021 16:13 | 61,2 |
| 85 | 28.09.2021 16:14 | 56 |
| 86 | 28.09.2021 16:15 | 52,6 |
| 87 | 28.09.2021 16:16 | 54,1 |
| 88 | 28.09.2021 16:17 | 53,3 |
| 89 | 28.09.2021 16:18 | 52,8 |
| 90 | 28.09.2021 16:19 | 55,3 |
| 91 | 28.09.2021 16:20 | 58,8 |
| 92 | 28.09.2021 16:21 | 58,9 |
| 93 | 28.09.2021 16:22 | 58,6 |
| 94 | 28.09.2021 16:23 | 64,5 |
| 95 | 28.09.2021 16:24 | 61 |
| 96 | 28.09.2021 16:25 | 59,6 |
| 97 | 28.09.2021 16:26 | 60 |
| 98 | 28.09.2021 16:27 | 57,9 |
| 99 | 28.09.2021 16:28 | 55,9 |
| 100 | 28.09.2021 16:29 | 56,8 |
| 101 | 28.09.2021 16:30 | 53,6 |
| 102 | 28.09.2021 16:31 | 56 |
| 103 | 28.09.2021 16:32 | 52,7 |
| 104 | 28.09.2021 16:33 | 55,5 |
| 105 | 28.09.2021 16:34 | 52,7 |
| 106 | 28.09.2021 16:35 | 60 |
| 107 | 28.09.2021 16:36 | 53,5 |
| 108 | 28.09.2021 16:37 | 49,9 |
| 109 | 28.09.2021 16:38 | 67,4 |
| 110 | 28.09.2021 16:39 | 57,2 |
| 111 | 28.09.2021 16:40 | 56,1 |
| 112 | 28.09.2021 16:41 | 55,5 |
| 113 | 28.09.2021 16:42 | 51,4 |
| 114 | 28.09.2021 16:43 | 58,7 |



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| 115 | 28.09.2021 16:44 | 60,4 |
| 116 | 28.09.2021 16:45 | 59,7 |
| 117 | 28.09.2021 16:46 | 58,9 |
| 118 | 28.09.2021 16:47 | 61,4 |
| 119 | 28.09.2021 16:48 | 57,9 |
| 120 | 28.09.2021 16:49 | 59,8 |
| 121 | 28.09.2021 16:50 | 58,2 |
| 122 | 28.09.2021 16:51 | 56,5 |
| 123 | 28.09.2021 16:52 | 58,2 |
| 124 | 28.09.2021 16:53 | 61,7 |
| 125 | 28.09.2021 16:54 | 61,3 |
| 126 | 28.09.2021 16:55 | 61,4 |
| 127 | 28.09.2021 16:56 | 53,4 |
| 128 | 28.09.2021 16:57 | 50,2 |
| 129 | 28.09.2021 16:58 | 58,9 |
| 130 | 28.09.2021 16:59 | 52,5 |
| 131 | 28.09.2021 17:00 | 54,1 |
| 132 | 28.09.2021 17:01 | 55,2 |
| 133 | 28.09.2021 17:02 | 47,7 |
| 134 | 28.09.2021 17:02 | 54 |

| N2 გაზომვა | | |
|-------------------------|------------------------------------|----------------------------|
| თარიღი | ადგილი | დამორეზა ხმაურის წყაროსგან |
| 2021/09/29 - 2021/09/29 | უახლოესი საცხოვრებელი სახლის ეზოში | 30 მ. |
| N2 გაზომვის შედეგები | | |
| 2 საათის საშუალო | | 52,2 |
| წუთობრივი მონაცემი | | |
| 1 | 28.09.2021 14:50 | 61,3 |
| 2 | 28.09.2021 14:51 | 52,7 |
| 3 | 28.09.2021 14:52 | 62 |
| 4 | 28.09.2021 14:53 | 67,7 |
| 5 | 28.09.2021 14:54 | 50,9 |
| 6 | 28.09.2021 14:55 | 49,6 |
| 7 | 28.09.2021 14:56 | 49,2 |
| 8 | 28.09.2021 14:57 | 47,5 |



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| 9 | 28.09.2021 14:58 | 50,1 |
| 10 | 28.09.2021 14:59 | 46,2 |
| 11 | 28.09.2021 15:00 | 50,1 |
| 12 | 28.09.2021 15:01 | 50,9 |
| 13 | 28.09.2021 15:02 | 45,2 |
| 14 | 28.09.2021 15:03 | 48,3 |
| 15 | 28.09.2021 15:04 | 47,2 |
| 16 | 28.09.2021 15:05 | 43,7 |
| 17 | 28.09.2021 15:06 | 47 |
| 18 | 28.09.2021 15:07 | 46,3 |
| 19 | 28.09.2021 15:08 | 49,4 |
| 20 | 28.09.2021 15:09 | 54,2 |
| 21 | 28.09.2021 15:10 | 51,7 |
| 22 | 28.09.2021 15:11 | 47,8 |
| 23 | 28.09.2021 15:12 | 52,5 |
| 24 | 28.09.2021 15:13 | 55,3 |
| 25 | 28.09.2021 15:14 | 50,7 |
| 26 | 28.09.2021 15:15 | 47,5 |
| 27 | 28.09.2021 15:16 | 49,1 |
| 28 | 28.09.2021 15:17 | 48,1 |
| 29 | 28.09.2021 15:18 | 57 |
| 30 | 28.09.2021 15:19 | 59 |
| 31 | 28.09.2021 15:20 | 57,7 |
| 32 | 28.09.2021 15:21 | 58,2 |
| 33 | 28.09.2021 15:22 | 57,3 |
| 34 | 28.09.2021 15:23 | 57 |
| 35 | 28.09.2021 15:24 | 54,4 |
| 36 | 28.09.2021 15:25 | 60,2 |
| 37 | 28.09.2021 15:26 | 54,8 |
| 38 | 28.09.2021 15:27 | 55,1 |
| 39 | 28.09.2021 15:28 | 50,2 |
| 40 | 28.09.2021 15:29 | 49,9 |
| 41 | 28.09.2021 15:30 | 51,1 |
| 42 | 28.09.2021 15:31 | 52 |
| 43 | 28.09.2021 15:32 | 48,8 |
| 44 | 28.09.2021 15:33 | 46,3 |
| 45 | 28.09.2021 15:34 | 47,2 |
| 46 | 28.09.2021 15:35 | 48,4 |
| 47 | 28.09.2021 15:36 | 52,6 |
| 48 | 28.09.2021 15:37 | 54,3 |
| 49 | 28.09.2021 15:38 | 48 |
| 50 | 28.09.2021 15:39 | 49,4 |



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| 51 | 28.09.2021 15:40 | 52,3 |
| 52 | 28.09.2021 15:41 | 58,4 |
| 53 | 28.09.2021 15:42 | 59,1 |
| 54 | 28.09.2021 15:43 | 47,9 |
| 55 | 28.09.2021 15:44 | 54,9 |
| 56 | 28.09.2021 15:45 | 47 |
| 57 | 28.09.2021 15:46 | 45,3 |
| 58 | 28.09.2021 15:47 | 50,4 |
| 59 | 28.09.2021 15:48 | 53,3 |
| 60 | 28.09.2021 15:49 | 51,1 |
| 61 | 28.09.2021 15:50 | 54 |
| 62 | 28.09.2021 15:51 | 54,6 |
| 63 | 28.09.2021 15:52 | 48 |
| 64 | 28.09.2021 15:53 | 50,6 |
| 65 | 28.09.2021 15:54 | 52 |
| 66 | 28.09.2021 15:55 | 49,5 |
| 67 | 28.09.2021 15:56 | 51,1 |
| 68 | 28.09.2021 15:57 | 53,4 |
| 69 | 28.09.2021 15:58 | 64,5 |
| 70 | 28.09.2021 15:59 | 63,2 |
| 71 | 28.09.2021 16:00 | 55,3 |
| 72 | 28.09.2021 16:01 | 56,7 |
| 73 | 28.09.2021 16:02 | 46,2 |
| 74 | 28.09.2021 16:03 | 52,3 |
| 75 | 28.09.2021 16:04 | 55,4 |
| 76 | 28.09.2021 16:05 | 46,9 |
| 77 | 28.09.2021 16:06 | 50,7 |
| 78 | 28.09.2021 16:07 | 52,5 |
| 79 | 28.09.2021 16:08 | 56,9 |
| 80 | 28.09.2021 16:09 | 61,8 |
| 81 | 28.09.2021 16:10 | 55,6 |
| 82 | 28.09.2021 16:11 | 47 |
| 83 | 28.09.2021 16:12 | 49,5 |
| 84 | 28.09.2021 16:13 | 56 |
| 85 | 28.09.2021 16:14 | 52,3 |
| 86 | 28.09.2021 16:15 | 49,4 |
| 87 | 28.09.2021 16:16 | 49 |
| 88 | 28.09.2021 16:17 | 51,3 |
| 89 | 28.09.2021 16:18 | 50,5 |
| 90 | 28.09.2021 16:19 | 51,5 |
| 91 | 28.09.2021 16:20 | 51,8 |
| 92 | 28.09.2021 16:21 | 53,5 |
| 93 | 28.09.2021 16:22 | 53 |



| | | |
|-----|------------------|------|
| 94 | 28.09.2021 16:23 | 56,8 |
| 95 | 28.09.2021 16:24 | 57,9 |
| 96 | 28.09.2021 16:25 | 56,1 |
| 97 | 28.09.2021 16:26 | 55,6 |
| 98 | 28.09.2021 16:27 | 52,2 |
| 99 | 28.09.2021 16:28 | 48,1 |
| 100 | 28.09.2021 16:29 | 50,8 |
| 101 | 28.09.2021 16:30 | 46,1 |
| 102 | 28.09.2021 16:31 | 53,1 |
| 103 | 28.09.2021 16:32 | 48 |
| 104 | 28.09.2021 16:33 | 51,6 |
| 105 | 28.09.2021 16:34 | 50 |
| 106 | 28.09.2021 16:35 | 55,9 |
| 107 | 28.09.2021 16:36 | 51 |
| 108 | 28.09.2021 16:37 | 46,8 |
| 109 | 28.09.2021 16:38 | 60,2 |
| 110 | 28.09.2021 16:39 | 52 |
| 111 | 28.09.2021 16:40 | 50,7 |
| 112 | 28.09.2021 16:41 | 52,3 |
| 113 | 28.09.2021 16:42 | 49 |
| 114 | 28.09.2021 16:43 | 54,7 |
| 115 | 28.09.2021 16:44 | 52,5 |
| 116 | 28.09.2021 16:45 | 52,4 |
| 117 | 28.09.2021 16:46 | 53,3 |
| 118 | 28.09.2021 16:47 | 55,9 |
| 119 | 28.09.2021 16:48 | 50,5 |
| 120 | 28.09.2021 16:49 | 54,9 |
| 121 | 28.09.2021 16:50 | 53,6 |
| 122 | 28.09.2021 16:51 | 50,5 |
| 123 | 28.09.2021 16:52 | 52,8 |
| 124 | 28.09.2021 16:53 | 57,2 |
| 125 | 28.09.2021 16:54 | 57 |
| 126 | 28.09.2021 16:55 | 54,6 |
| 127 | 28.09.2021 16:56 | 50,6 |
| 128 | 28.09.2021 16:57 | 46,4 |
| 129 | 28.09.2021 16:58 | 51,9 |
| 130 | 28.09.2021 16:59 | 50,4 |
| 131 | 28.09.2021 17:00 | 51,5 |
| 132 | 28.09.2021 17:01 | 49,4 |
| 133 | 28.09.2021 17:02 | 43,5 |
| 134 | 28.09.2021 17:02 | 47,1 |




გაზომვის სისწორეზე პასუხისმგებელი პირი:


**შ.პ.ს. „ეკო-სპექტრი“-ს
საგამოცდო ლაბორატორიის უფროსი
არჩილ რევაზიშვილი**

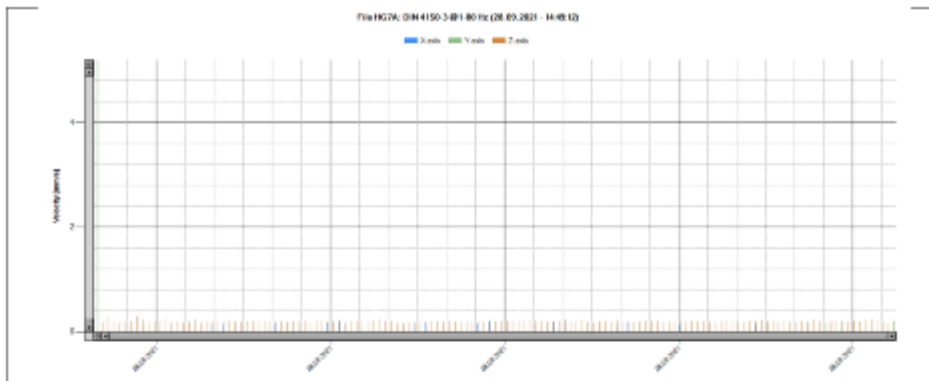


Environmental Quality Measurement Data (MAR-02), 29 September 2021, Vibration (c)

შენიშვნა: ვიზრაციის საწყისი და საბოლოო მონაცემები მნიშვნელოვნად მაღალია, რაც განპირობებულია აპარატის ეკრანთან შეხებით (ჩართვის და გამორთვის ღილაკის დაჭერით). შესაბამისად ეს მონაცემები არ გამოიყენება ვიზრაციის გავლენის შეფასებაში.

| გაზომვის პროტოკოლი NI | |
|---|--|
| 1. ძირითადი | |
| 1.1 პასუხისმგებელი პირი | არჩილ რევაზიშვილი - საგამოცდო ლაბორატორიის უფროსი |
| 1.2 გაზომვის პერიოდი | 28.09.2021 14:49:12 - 28.09.2021 17:07:33 |
| 2. ვიზრაციის სახეობა | |
| 2.1 წყარო | სამშენებლო სამუშაოები |
| 2.2 ოპერირების პირობები | ინტენსიური მუშაობა |
| 3. სტრუქტურა | |
| 3.1 სახელი და მისამართი | ქ. მარნეული |
| 3.2 კლასიფიკაცია | საცხოვრებელი შენობა (დახურული სივრცე) |
| 3.3 აღწერა | DIN 4150-3 სტანდარტის მიხედვით 2 კლასის ნაგებობა (საცხოვრებელი შენობები) |
| 4. მდებარეობა და პოზიცია | |
| 4.1 ვიზრაციის წყარო | |
|  | |

| | |
|--|---|
|  | |
| 5. გარემო პირობები | დახურული სივრცე: იატაკის სწორი ზედაპირი (ბეტონის იატაკი) |
| 6. სუბიექტური დაკვირვება | სამუშაო სპეციფიკის ვიბრაციას საერთო მდგომარეობაზე ზეგავლენა არ გააჩნია |
| 7. საზომი უჯვები | <p>Triaxial Vibration Meter VM40B სერიული ნომერი: 180665; კალიბრაციის თარიღი: ივნ 2021; გაზომვის მეთოდი: DIN 4150-3; პარამეტრები: short time found; სიხშირის დიაპაზონი: 1-80 ჰც; გამოწვევის რეჟიმი: 60 წმ. + ღონისძიება; გაზომვის რეჟიმი და ანგარიშის შედეგა ხორციელდება VM40MDB-ს პროგრამული უზრუნველყოფით.</p> |
| 8. გაზომვის შედეგი | |
| 8.1 ღონისძიების დიაგრამა | |



| თარიღი | დრო | X მიმართ. | Y მიმართ. | Z მიმართ. | ერთეული | გამომწვევი მოვლენა |
|------------|----------|--------------|--------------|--------------|---------|-----------------------|
| 28.09.2021 | 14:49:12 | 1,68 | 1,59 | 4,28 | mm/s | 0-W |
| 28.09.2021 | 14:49:12 | 201,01 | 106,9 | 182,26 | mm/s | W-A |
| 28.09.2021 | 14:49:13 | 0,68 | 0,59 | 0,65 | mm/s | A-0 |
| 28.09.2021 | 14:49:45 | 201,01 | 106,9 | OVERL | mm/s | (T) |
| 28.09.2021 | 14:50:45 | 0,16 | 0,15 | 0,18 | mm/s | (T) |
| 28.09.2021 | 14:51:44 | 0,22 | 0,3 | 0,2 | mm/s | (T) |
| 28.09.2021 | 14:52:43 | 0,15 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 14:53:44 | 0,15 | 0,17 | 0,16 | mm/s | (T) |
| 28.09.2021 | 14:54:43 | 0,17 | 0,19 | 0,18 | mm/s | (T) |
| 28.09.2021 | 14:55:43 | 0,16 | 0,16 | 0,19 | mm/s | (T) |
| 28.09.2021 | 14:56:43 | 0,21 | 0,2 | 0,29 | mm/s | (T) |
| 28.09.2021 | 14:57:43 | 0,15 | 0,22 | 0,17 | mm/s | (T) |
| 28.09.2021 | 14:58:42 | 0,16 | 0,17 | 0,17 | mm/s | (T) |
| 28.09.2021 | 14:59:42 | 0,15 | 0,17 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:00:42 | 0,14 | 0,18 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:01:42 | 0,24 | 0,25 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:02:41 | 0,17 | 0,17 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:03:41 | 0,15 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:04:41 | 0,16 | 0,15 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:05:41 | 0,15 | 0,21 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:06:40 | 0,15 | 0,24 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:07:41 | 0,17 | 0,15 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:08:40 | 0,15 | 0,2 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:09:40 | 0,15 | 0,18 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:10:39 | 0,17 | 0,19 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:11:40 | 0,15 | 0,17 | 0,2 | mm/s | (T) |
| 28.09.2021 | 15:12:39 | 0,17 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:13:39 | 0,18 | 0,16 | 0,19 | mm/s | (T) |



| | | | | | | |
|------------|----------|------|------|------|------|-----|
| 28.09.2021 | 15:14:38 | 0,14 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:15:39 | 0,18 | 0,2 | 0,21 | mm/s | (T) |
| 28.09.2021 | 15:16:38 | 0,15 | 0,18 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:17:38 | 0,17 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:18:37 | 0,16 | 0,19 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:19:38 | 0,16 | 0,19 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:20:37 | 0,17 | 0,2 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:21:37 | 0,16 | 0,17 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:22:36 | 0,17 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:23:36 | 0,16 | 0,17 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:24:36 | 0,16 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:25:35 | 0,16 | 0,21 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:26:36 | 0,15 | 0,16 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:27:35 | 0,17 | 0,2 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:28:35 | 0,16 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:29:34 | 0,17 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:30:35 | 0,2 | 0,2 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:31:34 | 0,18 | 0,23 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:32:34 | 0,17 | 0,16 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:33:33 | 0,14 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 15:34:34 | 0,18 | 0,21 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:35:33 | 0,16 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:36:33 | 0,18 | 0,2 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:37:32 | 0,18 | 0,22 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:38:33 | 0,13 | 0,17 | 0,24 | mm/s | (T) |
| 28.09.2021 | 15:39:32 | 0,2 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:40:32 | 0,2 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:41:31 | 0,13 | 0,15 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:42:32 | 0,14 | 0,16 | 0,15 | mm/s | (T) |
| 28.09.2021 | 15:43:31 | 0,16 | 0,16 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:44:31 | 0,17 | 0,17 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:45:30 | 0,14 | 0,17 | 0,21 | mm/s | (T) |
| 28.09.2021 | 15:46:31 | 0,18 | 0,16 | 0,16 | mm/s | (T) |
| 28.09.2021 | 15:47:30 | 0,15 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 15:48:30 | 0,14 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:49:30 | 0,14 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:50:30 | 0,13 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:51:29 | 0,14 | 0,17 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:52:29 | 0,14 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:53:29 | 0,14 | 0,15 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:54:29 | 0,18 | 0,16 | 0,17 | mm/s | (T) |
| 28.09.2021 | 15:55:28 | 0,16 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 15:56:28 | 0,15 | 0,18 | 0,16 | mm/s | (T) |



| | | | | | | |
|------------|----------|------|------|------|------|-----|
| 28.09.2021 | 15:57:28 | 0,19 | 0,22 | 0,15 | mm/s | (T) |
| 28.09.2021 | 15:58:28 | 0,16 | 0,17 | 0,19 | mm/s | (T) |
| 28.09.2021 | 15:59:27 | 0,15 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:00:27 | 0,16 | 0,17 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:01:27 | 0,17 | 0,18 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:02:27 | 0,17 | 0,21 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:03:26 | 0,2 | 0,17 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:04:26 | 0,16 | 0,24 | 0,16 | mm/s | (T) |
| 28.09.2021 | 16:05:26 | 0,16 | 0,18 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:06:26 | 0,17 | 0,17 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:07:25 | 0,18 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:08:25 | 0,18 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:09:25 | 0,15 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:10:25 | 0,18 | 0,18 | 0,23 | mm/s | (T) |
| 28.09.2021 | 16:11:24 | 0,17 | 0,19 | 0,15 | mm/s | (T) |
| 28.09.2021 | 16:12:24 | 0,15 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:13:24 | 0,15 | 0,17 | 0,22 | mm/s | (T) |
| 28.09.2021 | 16:14:24 | 0,15 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:15:23 | 0,15 | 0,15 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:16:23 | 0,17 | 0,18 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:17:23 | 0,16 | 0,18 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:18:23 | 0,14 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:19:22 | 0,13 | 0,18 | 0,22 | mm/s | (T) |
| 28.09.2021 | 16:20:22 | 0,17 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:21:22 | 0,18 | 0,17 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:22:22 | 0,17 | 0,16 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:23:21 | 0,15 | 0,17 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:24:21 | 0,18 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:25:21 | 0,16 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:26:21 | 0,19 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:27:20 | 0,16 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:28:21 | 0,17 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:29:20 | 0,14 | 0,15 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:30:19 | 0,14 | 0,18 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:31:19 | 0,17 | 0,18 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:32:18 | 0,14 | 0,17 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:33:19 | 0,17 | 0,18 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:34:18 | 0,21 | 0,17 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:35:18 | 0,18 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:36:17 | 0,14 | 0,16 | 0,15 | mm/s | (T) |
| 28.09.2021 | 16:37:18 | 0,14 | 0,19 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:38:17 | 0,13 | 0,23 | 0,16 | mm/s | (T) |
| 28.09.2021 | 16:39:17 | 0,13 | 0,19 | 0,17 | mm/s | (T) |



| | | | | | | |
|------------|----------|------|------|------|------|-----|
| 28.09.2021 | 16:40:16 | 0,17 | 0,21 | 0,15 | mm/s | (T) |
| 28.09.2021 | 16:41:17 | 0,15 | 0,19 | 0,16 | mm/s | (T) |
| 28.09.2021 | 16:42:17 | 0,15 | 0,19 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:43:16 | 0,14 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:44:17 | 0,21 | 0,18 | 0,22 | mm/s | (T) |
| 28.09.2021 | 16:45:16 | 0,17 | 0,2 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:46:16 | 0,18 | 0,22 | 0,19 | mm/s | (T) |
| 28.09.2021 | 16:47:15 | 0,17 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:48:15 | 0,15 | 0,17 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:49:15 | 0,17 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:50:15 | 0,14 | 0,18 | 0,16 | mm/s | (T) |
| 28.09.2021 | 16:51:14 | 0,19 | 0,2 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:52:14 | 0,13 | 0,18 | 0,17 | mm/s | (T) |
| 28.09.2021 | 16:53:14 | 0,16 | 0,17 | 0,23 | mm/s | (T) |
| 28.09.2021 | 16:54:14 | 0,15 | 0,16 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:55:13 | 0,17 | 0,17 | 0,16 | mm/s | (T) |
| 28.09.2021 | 16:56:13 | 0,17 | 0,17 | 0,2 | mm/s | (T) |
| 28.09.2021 | 16:57:13 | 0,15 | 0,19 | 0,18 | mm/s | (T) |
| 28.09.2021 | 16:58:13 | 0,15 | 0,18 | 0,21 | mm/s | (T) |
| 28.09.2021 | 16:59:12 | 0,18 | 0,19 | 0,17 | mm/s | (T) |
| 28.09.2021 | 17:00:12 | 0,16 | 0,16 | 0,21 | mm/s | (T) |
| 28.09.2021 | 17:01:12 | 0,13 | 0,19 | 0,19 | mm/s | (T) |
| 28.09.2021 | 17:02:12 | 0,16 | 0,19 | 0,22 | mm/s | (T) |
| 28.09.2021 | 17:03:11 | 0,17 | 0,18 | 0,24 | mm/s | (T) |
| 28.09.2021 | 17:04:11 | 0,2 | 0,2 | 0,2 | mm/s | (T) |
| 28.09.2021 | 17:05:11 | 0,14 | 0,16 | 0,19 | mm/s | (T) |
| 28.09.2021 | 17:06:11 | 0,16 | 0,16 | 0,15 | mm/s | (T) |
| 28.09.2021 | 17:07:10 | 0,18 | 0,21 | 0,18 | mm/s | (T) |
| 28.09.2021 | 17:07:33 | 0,71 | 0,37 | 0,89 | mm/s | END |

9. შეფასება მშენებლობის ვიზრაციას საერთო მდგომარეობაზე ზეგავლენა არ გააჩნია

10. ხელმოწერა


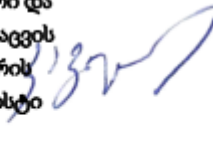
პასუხისმგებელი პირი და ხელმოწერა არჩილ რევაზიშვილი



Map: Project territory nearest residential house



Note: the map above shows the project territory, Nearest residential house (No1, noise; N2, noise and vibration; dust close to the WWTP construction)

| | | | |
|-------------------------------------|---|---|--|
| არჩილ რევაზიშვილი | | დავით კავილაძე | |
| შ.პ.ს. „ეკო-სპექტრი“ | ხელმოწერა | შ.პ.ს. „ეკო-სპექტრი“ | ხელმოწერა |
| საგამოცდო ლაბორატორიის უფროსი |  | სოციალური და გარემოს დაცვის სამსახურის სპეციალისტი |  |

ANNEX B: PHOTOS OF SITES

MAR-02, measures undertaken by contractor to keep the construction site safe of Covid-19 cases.

Photo N1



Constraction of WWTP in Marneuli (MAR-02)

Photo N1



Photo N2



Photo N3



Photo N 4



Photo N 5



Photo N6



Construction and Rehabilitation of the Water Supply System in Chiatura (CHI-02)

Photo No1 – Construction of Water Supply System



Photo No2 – Construction of Avarioni Reservoir



Photo No3



Construction and Rehabilitation of the Water Supply System in Marneuli MAR-02

Fencing of Jandari Reservoir

Photo No1



ANNEX C: NON-COMPLIANCE NOTICE, MAR-02, 8 NOVEMBER 2011

Non-Compliance Notice

| | |
|--|--|
| Project: Construction Supervision (under USIIP, Tranche 6 Projects), UWSCG-ICB-MAR-02-2019 | Non-compliance Notice Marneuli 02 |
| Contract No: Construction Of Wastewater Treatment Plant in Marneuli | |
| Contractor: JV TWS-INSI | |
| Reference: Pollution Prevention; Waste Management | |
| <p>This notice is to advise the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently.</p> | |
| <p><u>GENERAL COMMENT FOR ALL SITES:</u></p> <p>Housekeeping on construction site must be improved. Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spill response kits should be placed at the appropriate locations. All equipment must be checked against lubricant and fuel leaking. Refuelling station/trucks should be equipped with the spill kit and relevant firefighting equipment; drip tray should be used for fuel spillage prevention. Relevant traffic signs and flagmen should control traffic movement properly. Top Soil must be prevented from damage.</p> <p>Environmental representative is nominated;</p> <p>Training records are not provided;</p> <p>Waste Management Plan is approved by MEPA;</p> | |
| <p><u>NON-COMPLIANCE IN Marneuli WWTP</u></p> <p>Marneuli WWTP</p> <ul style="list-style-type: none"> - Waste Soil is dumped along the access road, according to SSEMP it should be removed, but based on the local population information this soil at the moment is protecting their property from flooding. Flooding may destroy site surroundings and in case if during this year similar to last year flooding will have place it is possible that site itself will be flooded. At the same time Client was requested to consider retaining wall along the channel to protect locals from possible flooding; - Construction waste possibly dumped by Local population is observed on waste soil along the access road. Access to the stored soil must be restricted and additional explanations to locals must be done. Also it is possible to inform local municipality that illegal waste area has appeared; - Waste containers used by Contractor must be regularly emptied; - Remaining from Concrete washing pit is excavated, but it there is no information that it was disposed according to WMP; Seems lots of concrete works are ahead proper concrete washing pit must be organized; - Storage area for hazardous waste handling is prepared, but it is not managed properly; - Not properly segregated waste is observed in waste containers; | |



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

Date of site visit: 2021.11.08

Environmental Specialist – Revaz Erukidze

- Housekeeping have to be improved;
- Smoking areas are marked, but they are not used, cigarette packs and butts are thrown all around the site. Additional training on this subject is needed.






NON-COMPLIANCE NOTICE, MAR-02, 8 December 2021

United Water Supply Company of Georgia

08.12.2021

Non-Compliance Notice

| | | |
|---|--|---|
| Project: Urban Services Improvement Investment Program, Georgia | Non-compliance Notice Marneuli (MAR-02) | |
| Contract No: UWSCG-ICB-MAR-02-2019 | | |
| Contractor: JV TWS-INSI | | |
| Reference: Construction of Waste Water Treatment Plant in Marneuli | | |
| This notice is to advise you, the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently . | | |
| <p><u>NON-COMPLIANCE IN MARNEULI</u></p> | | |
| <p>MARNEULI WWTP</p> | | |
| <ul style="list-style-type: none"> • Site internally should be better arranged, materials should be better segregated/stored and cleaned regularly (photo #1) • Cable should be relocated to avoid any damages on users of power source; Unsafe connection to the power socket should be immediately improved (photo #2) • Concrete wash out pit should be arranged at construction site, "Concrete Rivers" should be immediately removed from the soil (Photo #3) • Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be stored at the construction site (Photo #4, #5) to avoid soil contamination • Top Soil should be stored properly in requested amount, and managed in accordance with the required regulations (Photo #6) | | |
| <p>Photos of Marneuli WWTP</p> | | |
| <p style="text-align: center;">Photo #1</p>  | <p style="text-align: center;">Photo #2</p>  | <p style="text-align: center;">Photo #3</p>  |
| <p style="text-align: center;">Photo #4</p> | <p style="text-align: center;">Photo #5</p> | <p style="text-align: center;">Photo #6</p> |



All these conditions have to be remedied within 7 days by the prime Contractor (JV TWS-INSI)

Date of site visit 08.12.2021

Kate Chomakhidze
UWSCG/USIIP Environmental Consultant

Site visit was attended by Ms.Maka Goderdzishvili,
Head, Department of Environmental Protection and
Permits (DEPP) of UWSCG

NON-COMPLIANCE NOTICE MAR-02, 15 DECEMBER 2021

Non-Compliance Notice

| | |
|--|--|
| Project: Construction Supervision (under USIIP, Tranche 6 Projects), UWSCG-ICB-MAR-02-2019 | Non-compliance Notice Marneuli 02 |
| Contract No: Construction Of Wastewater Treatment Plant in Marneuli | |
| Contractor: JV TWS-INSI | |
| Reference: Top Soil striping and Soil storage | |
| <p>This notice is to advise the prime Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented urgently.</p> | |
| <p><u>GENERAL COMMENT FOR ALL SITES:</u></p> <p>Environmental representative – Mr. Guram Tandilashvili;</p> <p>As it was mentioned in previous reports that top soil striped from site is stored separately from sub-soil on the east adjacent to the construction site.</p> <p>Additionally, Contractor rented the peace of land from local person to temporarily store sub-soil, which will be used for the refill of excavations. Land is located on the waste side of the site, along the access road.</p> <p><u>NON-COMPLIANCE IN Marneuli WWTP</u></p> <p>Marneuli WWTP</p> <ul style="list-style-type: none"> - According to SSEMP and project requirements location of the temporary dump site had to be agreed with engineer and sufficient documentation such as storage methodology had to be agreed with Engineer. - Prior to dumping top soil had to be removed. Only after removal and proper storage of top soil temporary dumping was allowed. - This action is against Georgian law on Top Soil Protection and may cause penalties from state authorities. - After removal of the material top soil layer must be reinstated. - Storage are used by the project must be properly marked and warning signs must be provided at the location; | |



| | |
|--|--|
| All these conditions have to be remedied within 10 days by the prime Contractor | |
| ✓ Soil materials must be removed and stored in a proper way without damage of topsoil; | |
| Date of site visit: 2021.12.15 | |
| Environmental Specialist – Revaz E nukidze | |

NON-COMPLIANCE NOTICE CHI-01, 8 AUGUST 2021

Social Report on Chiatura Site Visit

| | |
|-------------|--|
| Site: | Chiatura (CHI-01) |
| Contractor: | "Akkord Industry Construction Investment Corporation" OJSC |
| Date: | 12.08.2021 |
| Inspectors: | Social safeguard specialist of the Engineer |

Social Safeguard Specialist conducted regular site visits on 12th of August 2021. The Construction Contractor has stopped construction activities for weeks due to the financial issues. No complaints were identified during the site visit.

Abandoned, unfinished construction activities were observed during the site visit. Roads are not reinstated; materials are left in the street. Etc.

Corrective Actions:

1. The Contractor shall complete activities, which are abandoned and might cause complaints from locals.

The pictures of the inspection:



NON-COMPLIANCE NOTICE CHI-01, 3 SEPTEMBER 2021



JV of Hill International N.V. & Temelsu International Engineering Service Inc.
& Sub Consultant Policy and Management Consulting Group (PMCG)



Urban Services Improvement Investment Program, Tranche 6

Ref.: CWSSC-Out-1108-0511-2021-09-03

Date: 03rd of September, 2021

Representation (Branch) of Akkord Industry Construction
Investment Corporation in Georgia "Akkord Georgia"
4 Besiki Str., Office 209 0108 Tbilisi, GEORGIA

Attention: Mr. David Kobakhidze, Director of "Akkord Georgia"

United Water Supply Company of Georgia (UWSCG)
Urban Services Improvement Investment Program, Tranche 6
Contract #: P43405-ICB-CHI-01: Construction of Water Supply System in Chiatura

Subject: To follow social safeguard rules

Refer: Visit of Social safeguard expert on 12 August 2021 to Chiatura

Dear Sir,

The social safeguard expert of our team visited Chiatura works. Based on her report, Akkord is requested to take following steps,

1. Make payment of outstanding salary to workers
2. Works are stopped and site is abandoned. Materials are lying at site. As such works should be started and in future should not be abandoned.
3. Road reinstatement works are not carried out despite working for one year in Avarioni area. This is causing great inconvenience to traffic and public. Road reinstatement works should be started soon.
4. Many defects are not rectified, causing water supply problems to some consumers, such as memorial boosters and Navradzeti boosters, incorrect meter readings, leakages in pipeline system etc. These should be rectified.

Yours faithfully,

Narendra Singh Shekhawat
Engineer's Representative /Chief Resident Engineer
Hill International-Temelsu J.V.

Encl: Site visit report dated 12 August 2021

Ecc: Ms. Ana Onashvili, Head of Projects Management Department, UWSCG

NON-COMPLIANCE NOTICE CHI-01, 3 NOVEMBER 2021

HILL
Hill International



JV of Hill International N.V. & Temelsu International Engineering Service Inc.
& Sub Consultant Policy and Management Consulting Group (PMCG)

Urban Services Improvement Investment Program, Tranche 6

Ref.: CWSSC-Out-1108-0522-2021-11-03

Date: 03rd of November, 2021

Representation (Branch) of Akkord Industry Construction
Investment Corporation in Georgia "Akkord Georgia"
4 Besiki Str., Office 209 0108 Tbilisi, GEORGIA

Attention: Mr. David Kobakhidze, Director of "Akkord Georgia"

United Water Supply Company of Georgia (UWSCG)
Urban Services Improvement Investment Program, Tranche 6
Contract #: P43405-ICB-CHI-01: Construction of Water Supply System in Chiatura

Subject: Requirement for compliance of social safeguards

Refer: Site visit report of our Social Safeguard Specialist on 25-10-2021

Dear Sir,

Following corrective actions should be taken and informed.

1. The Contractor shall complete activities, which are abandoned and cause public inconvenience and are safety hazards.
2. **The Contractor shall ensure that all works are conducted in a safe manner and works are provided with safety equipment and supervised by the safety personal.**
3. **The Contactor shall immediately pay the due salaries to workers.**

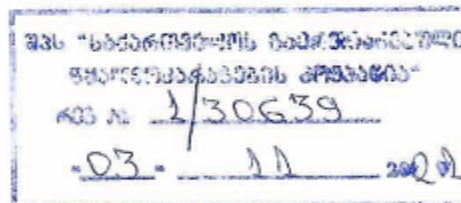
The pictures of the inspection are enclosed.

Yours faithfully,

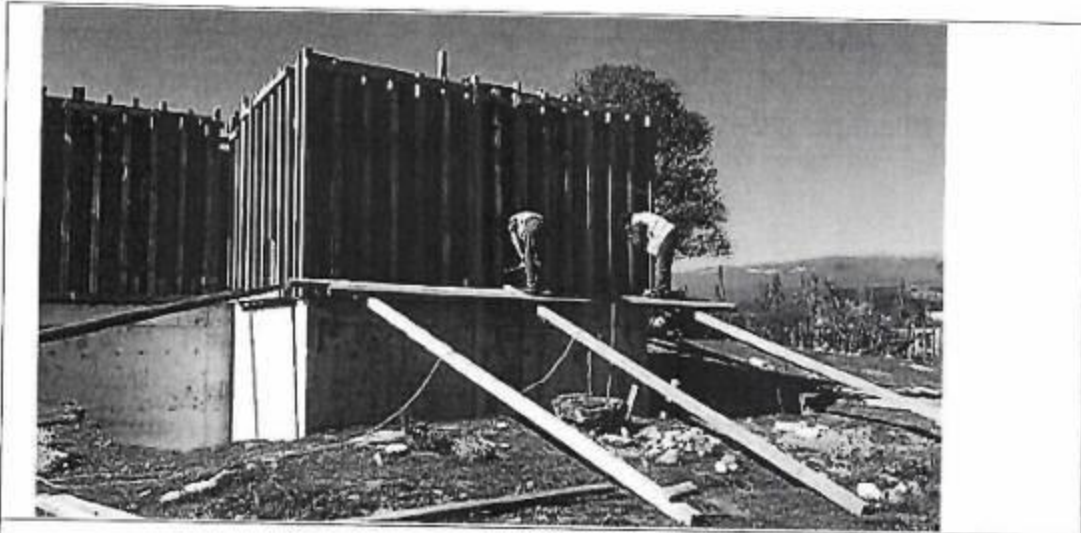
Narendra Singh Shekhawat
Engineer's Representative /Chief Resident Engineer
Hill International-Temelsu J.V.

Enc: 4 Photographs

Ecc: Ms. Irina Chikhladze, Head of Donors Funded Projects Management Department, UWSCG



Supporting Photos materials:



Pictures 1. 2. Unsafe activities

ANNEX D: ²EXPLANATORY NOTE, MAR-01, 5 MARCH 2021



საქართველოს გაერთიანებული
წყალმომარაგების კომპანია
UNITED WATER SUPPLY COMPANY OF GEORGIA

N _____
/ /



საზედამხედველო კომპანია JV Hill International & Temelsu International-ის ჯგუფის ხელმძღვანელს, ზ-5 ნარენდრა სინ შეხავატს,

ბატონო ნარენდრა,

გაცნობებთ, რომ 2021 წლის 17 ნოემბერს შპს „საქართველოს გაერთიანებული წყალმომარაგების კომპანიის“ (შემდგომში - კომპანია), გარემოს დაცვისა და ნებართვების დეპარტამენტის წარმომადგენლები მივლინებით იმყოფებოდნენ ქ.ჭიათურაში, აზიის განვითარების ბანკის მიერ დაფინანსებული, „ურბანული მომსახურის გაუმჯობესების საინვესტიციო პროგრამის“ (შემდგომში - პროგრამა) ფარგლებში, ჭიათურის წყალმომარაგების სისტემის რეაბილიტაციისა და მშენებლობის ქვე-პროექტის (CHI-01) გეგმიური გარემოსდაცვითი მონიტორინგის მიზნით, რომლის შედეგად გამოვლინდა გარემოსდაცვითი, სოციალური და შრომითი უსაფრთხოების ნორმების უხეში დარღვევა, რაც საფრთხეს უქმნის ადგილობრივ მოსახლეობას, ასევე, მშენებლობაზე დასაქმებულ პერსონალს და მოთხოვს დაუყოვნებლივ რეაგირებას სამშენებლო და საზედამხედველო კომპანიების მხრიდან.

მონიტორინგის შედეგად გამოვლენილი დარღვევები, ასევე, არ შეესაბამება აზიის განვითარების ბანკის გარემოსდაცვითი რეგულაციების (SPS 2009), „წინასწარი ეკოლოგიური კვლევის“ (IEE), ადგილისთვის დამახასიათებელი გარემოს მართვის გეგმების (SEMP) და საქართველოს გარემოსდაცვითი და შრომითი უსაფრთხოების კანონმდებლობით გათვალისწინებულ მოთხოვნებს, შესაბამისად, მუშა პერსონალისა და ადგილობრივი მოსახლეობის უბედური შემთხვევების თავიდან აცილების მიზნით, დაუყოვნებლივ უნდა განხორციელდეს შემარბილებელი ღონისძიებები.

აქვე უნდა აღინიშნოს, რომ კომპანიის მიერ სიტყვიერი და წერილობითი არაერგზის კომუნიკაციის შედეგად გამოითქვა მოსაზრება საზედამხედველო კომპანია „HILL“-ის გარემოსდაცვითი ექსპერტის CHI-01 ქვე-პროექტის განხორციელების პროცესში არასათანადო ჩართულობის თაობაზე, კერძოდ, მოთხოვნის მიუხედავად, არ ხდებდა შეუსაბამობის შეტყობინების (Non-compliance notice) მოზადება და წარდგენა სამშენებლო კომპანიისადმი, დადგენილი ფორმატით და გარემოსდაცვითი რეგულაციების მოთხოვნების შესაბამისად, რაც ასევე მოიცავს კონტრაქტორისთვის გამოსასწორებელი ვადის მითითებას და შემდგომ მონიტორინგს, თუ როგორ განხორციელდა მკორექტირებელი ქმედებები (Corrective Action Plan) სამშენებლო კომპანიის მიერ და მოხდა, თუ არა დარღვევების აღმოფხვრა მითითებულ

შპს

L.L.C.

აპარტიზმული, დიშორიანი 0186
ჩნა კორკორაძის ქუჩის №5
სტო: (032) 2 91 90 60
ტელ: 432630097

e-mail: info@uwscg.gov.ge
www.uwscg.gov.ge

5, Anna Politkovskaya St.
Tbilisi 0186, Georgia
Tel: (032) 2 91 90 60

² This Explanatory Note prepared by UWSCG/DEPP, reflects all the inconsistencies identified during the site visit on 17 November 2021 under CHI-01 sub-project (water supply network, Avarioni reservoir) and was sent to Supervision Consultant to ensure immediate improvements on sites. List of non-compliances are provided in the Table ??? above (See site visit CHI-01, 17 November 2021).

ვადებში. სამშენებლო კომპანია, ასევე, ვალდებულია მაკორექტირებელი ქმედებების შედეგად გაუმჯობესებული სამშენებლო მოედნების ფოტომასალა წარუდგინოს კომპანიას მისი მოთხოვნის შესაბამისად.

ქვემოთ წარმოდგენილია ჩვენს მიერ 2021 წლის 17 ნოემბერს მონიტორინგის შედეგად გამოვლენილი დარღვევები, რომლებიც ეხება ავარიონის რეზერვუარის მშენებლობას, ასევე, მასთან დამაკავშირებელი წყალმომარაგების ქსელისა და ძირითადი გადამცემი ხაზის მოწყობას CHI-01 ქვე-პროექტის ფარგლებში.



შემარბილებელი ღონისძიებები:

- უცხო პირთა სამშენებლო მოედანზე შესვლის თავიდან ასაცილებლად დაუყოვნებლივ უნდა მოეწყოს საინფორმაციო დაფა, კარიბჭე და დამცავი ღობე სამშენებლო მოედნის მთელს პერიმეტრზე;
- დროებითი დამცავი ბარიერები უნდა მოეწყოს ღია თხრილებისა და კატლანის გასწვრივაც, რათა თავიდან იქნას აცილებული სამშენებლო მოედანზე დასაქმებული პერსონალისა და ადგილობრივი მოსახლეობის დაზიანება;
- დაუყოვნებლივ უნდა განხორციელდეს სამშენებლო მოედნის განათება ღამის საათებში, რათა უზრუნველყოფილი იქნას ადგილობრივი მოსახლეობის დაცვა 24 საათის განმავლობაში.

ნიადაგის ჰუმუსოვანი ფენა

სამშენებლო მოედანზე დასაწყობებული ნიადაგის ჰუმუსოვანი ფენა (იხ. ფოტო #4, #5), არ შეესაბამება საქართველოს კანონმდებლობისა და საერთაშორისო რეგულაციების მოთხოვნებს და მოითხოვს დაუყოვნებლივ რეაგირებას.

ფოტო #4, ფოტო #5: სამშენებლო მოედანზე მოწყობილი ნიადაგის ჰუმუსოვანი ფენა



შემარბილებელი ღონისძიებები:

- ნიადაგის ნაყოფიერი ფენის მოხსნა და დროებითი დასაწყობება განხორციელდეს შესაბამისი რეგულაციების დაცვით;
- ნაყარი მოეწყოს ისე, რომ მისი სიმაღლე არ აღემატებოდეს 2 მ-ს;
- ნაყარის ფერდებს უნდა მიეცეს შესაბამისი დახრის (45°) კუთხე;
- ტერიტორია სადაც დასაწყობებული იქნება ნიადაგის ნაყოფიერი ფენა შემოისაზღვროს და მოეწყოს საინფორმაციო დაფა.

სამშენებლო მოედანზე დასაწყობებული სამშენებლო მასალა

სამშენებლო ტერიტორიის მთელს პერიმეტრზე მიმოვანტულია სამშენებლო მასალები და მშენებლობის შედეგად წარმოქმნილი მყარი ნარჩენები (იხ. ფოტო #6), რომელიც ზოგ შემთხვევაში ერთმანეთშია არეული. ასევე, აღსანიშნავია რკინის არმატურის დროებით დასაწყობებასთან დაკავშირებული პრობლემები, რაც საფრთხეს უქმნის მუშა პერსონალის უსაფრთხო გადაადგილებას სამშენებლო მოედანზე. შესაბამისად, მიზანშეწონილია სამშენებლო მასალის სათანადო დასაწყობება ნორმების დაცვით.

ფოტო #6: სამშენებლო მოედანზე დასაწყობებული სამშენებლო მასალა



შემარბილებელი ღონისძიებები:

- სამშენებლო მოედანი უნდა მოწესრიგდეს და რეგულარულად გაიწმინდოს;
- სხვადასხვა ტიპის სამშენებლო მასალა უნდა დასაწყობდეს ცალცალკე;
- სამშენებლო მასალის, მათ შორის, რკინის არმატურის დასაწყობება უნდა განხორციელდეს შესაბამისი ნორმების დაცვით.

სამშენებლო მოედანზე დასაქმებული პერსონალის შრომითი უსაფრთხოება

ზემოაღნიშნული მონიტორინგის შედეგად გამოვლინდა დარღვევები სამშენებლო მოედანზე დასაქმებული მუშახელის შრომითი უსაფრთხოების, მათ შორის, სიმაღლეზე მუშაობის კუთხით (იხ. ფოტო #7, #8), რაც მოითხოვს დაუყოვნებლივ რეაგირებას.

ფოტო #7, #8: სამშენებლო მოედანზე დასაქმებული მუშახელის სიმაღლეზე მუშაობის შრომითი უსაფრთხოება



შემარბილებელი ღონისძიებები:

- დასაქმებული პერსონალი უზრუნველყოფილი უნდა იყოს ინდივიდუალური დაცვის საშუალებებით;
- სიმალლეზე მუშაობისას პერსონალის დაზღვევა უნდა განხორციელდეს თოკებით და სპეციალური სამაგრებით;
- სამშენებლო მოედნის მთელს პერიმეტრზე მუშახელის უსაფრთხო გადაადგილების უზრუნველსაყოფად უნდა მოეწყოს შესაბამისი გადაადგილების საშუალებები და დროებითი ხიდეები;
- ჯანმრთელობისათვის სახიფათო უბნები შემოღობილი უნდა იყოს სათანადო მასალით;

ნარჩენების მართვა

სამშენებლო მოედანზე აღინიშნება ნარჩენების მართვის კუთხით არსებული პრობლემები, რაც მოითხოვს შესაბამისი ღონისძიებების გატარებას.

შემარბილებელი ღონისძიებები:

- საყოფაცხოვრებო და სახიფათო ნარჩენები უნდა დასაწყობდეს ცალ-ცალკე შესაბამისი წარწერებით;
- სახიფათო ნარჩენების კონტეინერი უნდა განთავსდეს სპეციალურად მოწყობილ ბეტონის სადგამზე შესაბამისი გადახურვით;
- საყოფაცხოვრებო ნარჩენები რეაგულარულად უნდა იყოს გატანილი მუნიციპალიტეტთან შეთანხმებულ ნაგავსაყრელზე;
- სახიფათო ნარჩენების გატანა უნდა განხორციელდეს შესაბამისი ხელშეკრულების საფუძველზე, სახიფათო ნარჩენების შემდგომი მართვის შესაბამისი ლიცენზიის მქონე კომპანიასთან;

სამშენებლო მოედნის ზეთითა და საპოხი მასალებით დაბინძურების თავიდან აცილება:

სამშენებლო მოედანზე არ არის წარმოდგენილი საწვავით, ზეთითა და საპოხი მასალით ნიადაგის პოტენციური დაბინძურების თავიდან აცილების საშუალებები. მონიტორინგის დროს დაფიქსირდა გენერატორი, რომელიც პირდაპირ ნიადაგზე იყო განთავსებული, სპეციალური სადგამის მოწყობის გარეშე (იხ. ფოტო #9), რაც იწვევს ნიადაგის დაბინძურებას და უნდა მოხდეს სასწრაფო რეაგირება.

ფოტო #9: სამშენებლო მოედანის ზეთითა და საწვავით დაბინძურება



შემარბილებელი ღონისძიებები

- ზეთითა და საპოხი მასალით დაბინძურების თავიდან ასაცილებლად, გენერატორის მუშაობისას უნდა მოეწყოს სპეციალური სადგამი;
- სამშენებლო მოედანზე უნდა არსებობდეს პოტენციურად დამაბინძურებელი მასალების (ზეთები, საპოხი მასალების და სხვ.) უსაფრთხოდ შენახვა/დაბინძურების საშუალება;
- საწვავის, ან საპოხი მასალების სამარაგო რეზერვუარის მოწყობის შემთხვევაში, რეზერვუარს უნდა ჰქონდეს ბეტონის ან თიხის შემოზღუდვა, რომლის შიდა ტევადობა არ იქნება რეზერვუარის მოცულობის 110%-ზე ნაკლები;
- საწვავით გამართვის უბნების დაფარვა უნდა განხორციელდეს ხრემის ფენით;
- სამშენებლო მოედანი უნდა აღიჭურვოს შესაბამისი ტექნიკური საშუალებებით და ინვენტარით (კონტეინერები, დაღვრის შემკრები საშუალებები და ა.შ.);

საჩივრების განხილვის მექანიზმი

სამშენებლო მოედანზე არ არის ადგილობრივი მოსახლეობის მხრიდან საჩივრების დაფიქსირების საშუალება, სათანადო რეაგირების უზრუნველსაყოფად, რაც წარმოადგენს აზიის განვითარების ბანკის რეგულაციების უხეშ დარღვევას.

შემარბილებელი ღონისძიებები

- საჩივრების დაფიქსირებისა და სათანადო აღრიცხვისთვის უზრუნველსაყოფად, სამშენებლო მოედანზე უნდა მოეწყოს საჩივრების განხილვის ყუთი;
- საჩივრის დაფიქსირების შემთხვევაში, უნდა მიმდინარეობდეს სააღრიცხვო ჟურნალის წარმოება.

ნიადაგის დაბინძურება ბეტონის გამორეცხვის შედეგად

სამშენებლო მოედანზე წარმოდგენილია ე.წ „ბეტონის მდინარეები“ (იხ. ფოტო #10), რომელიც ბეტონის გამორეცხვის სამუშაოების შედეგად არის წარმოქმნილი და წარმოადგენს გარემოსდაცვითი რეგულაციების უხეშ დარღვევას.

ფოტო #10: სამშენებლო მოედანზე ნიადაგზე დაღვრილი ბეტონი



ფოტო #12: წყალმომარაგების ქსელის მოწყობის სამუშაოები



შემარბილებელი ღონისძიებები

- საექსკავაციო სამუშაოების დასრულების შემდეგ უნდა განხორციელდეს გზის სარეაბილიტაციო სამუშაოები;
- ღრმა თხრილების (>2მ) გვერდების გამაგრება უნდა იყოს უზრუნველყოფილი, მუშახელის უსაფრთხოების მიზნით;
- შესაბამისი გამაფრთხილებელი/საინფორმაციო ნიშნები და დამცავი საშუალებები უნდა მოეწყოს მუშახელისა და ფეხით მოსიარულეთა ღია თხრილებში ჩავარდნის და უცხო პირების სამშენებლო უბნებზე შესვლის თავიდან ასაცილებლად;
- თხრილები უნდა მოეწყოს მოკლე მონაკვეთებად თითოეულ მათგანზე სამუშაოების (გათხრა, მილების ჩაწყობა და ამოვსება) ერთ დღეში დასრულების უზრუნველსაყოფად, წინააღმდეგ შემთხვევაში უნდა მოეწყოს დროებითი განათება თხრილებზე, რათა უზრუნველყოფილი იყოს ღია თხრილებისგან ადგილობრივი მოსახლეობის დაცვა 24 საათის განმავლობაში.

ზემოაღნიშნულიდან გამომდინარე, გთხოვთ, უზრუნველყოთ დარღვევების გამოსწორება CHI-01 ქვე-პროექტის ფარგლებში, სამშენებლო კომპანია „Akclik Group OJSC“ (Azerbaijan)-თან თანამშრომლობით. 15 კალენდარული დღის განმავლობაში და წარმოადგინოთ ადგილზე გამოსწორებული სიტუაციის ამსახველი ფოტომასალა.

შემარბილებელი ღონისძიებები

- სამშენებლო მოედანზე დაღვრილი ბეტონი სასწრაფოდ უნდა მოიხსნას და გატანილ იქნას ინერტული ნარჩენების განთავსების პოლიგონზე;
- იმ შემთხვევაში, თუ ბეტონის გამორეცხვის სამუშაოები მიმდინარეობს უშუალოდ სამშენებლო მოედანზე, უნდა მოეწყოს სპეციალური ორმო, სტანდარტების შესაბამისად, ბეტონის დაღვრისა და ნიადაგის დაზინძურების თავიდან ასაცილებლად.

წყალმომარაგების ქსელის მოწყობა:

მონიტორინგის პროცესში თვალშისაცემია ქალაქის მთელს ტერიტორიაზე, არასათანადოდ აღდგენილი და რეაბილიტირებული საგზაო საფარი, წყალმომარაგების ქსელის მოწყობის შემდეგ, რაც საფრთხეს უქმნის ადგილობრივი მოსახლეობის უსაფრთხო გადაადგილებას და მოითხოვს დაუყოვნებლივ რეაგირებას.

ასევე, აღსანიშნავია დარღვევები წყალმომარაგების ქსელების სამშენებლო სამუშაოების მიმდინარეობისას და მიტოვებული ღია თხრილები სათანადო დამცავი საშუალებების გარეშე (იხ. ფოტო #11, ფოტო #12).

ფოტო #11: წყალმომარაგების ქსელის მოწყობის სამუშაოები



ფოტო #12: წყალმომარაგების ქსელის მოწყობის სამუშაოები



შემარბილებელი ღონისძიებები

- საექსკავაციო სამუშაოების დასრულების შემდეგ უნდა განხორციელდეს გზის სარეაბილიტაციო სამუშაოები;
- ღრმა თხრილების (>2მ) გვერდების გამაგრება უნდა იყოს უზრუნველყოფილი, მუშახელის უსაფრთხოების მიზნით;
- შესაბამისი გამაფრთხილებელი/საინფორმაციო ნიშნები და დამცავი საშუალებები უნდა მოეწყოს მუშახელისა და ფეხით მოსიარულეთა ღია თხრილებში ჩავარდნის და უცხო პირების სამშენებლო უბნებზე შესვლის თავიდან ასაცილებლად;
- თხრილები უნდა მოეწყოს მოკლე მონაკვეთებად თითოეულ მათგანზე სამუშაოების (გათხრა, მიღების ჩაწყობა და ამოვსება) ერთ დღეში დასრულების უზრუნველსაყოფად, წინააღმდეგ შემთხვევაში უნდა მოეწყოს დროებითი განათება თხრილებზე, რათა უზრუნველყოფილი იყოს ღია თხრილებისგან ადგილობრივი მოსახლეობის დაცვა 24 საათის განმავლობაში.

ზემოაღნიშნულიდან გამომდინარე, გთხოვთ, უზრუნველყოთ დარღვევების გამოსწორება CHI-01 ქვე-პროექტის ფარგლებში, სამშენებლო კომპანია „Akclik Group OJSC“ (Azerbaijan)-თან თანამშრომლობით, 15 კალენდარული დღის განმავლობაში და წარმოადგინოთ ადგილზე გამოსწორებული სიტუაციის ამსახველი ფოტომასალა.

პატივისცემით,



აკაკი მშვიდლობაძე






დირექტორის მოადგილე

ANNEX E: CORRECTIVE ACTION PLAN MAR-02, 8 NOVEMBER 2021

Corrective Action Plan, 8 November 2021

| Non-compliance point | Non-compliance photo | Corrective action photo |
|---|----------------------|---|
| 1. Waste containers used by Contractor must be regularly emptied | |  <p style="text-align: center;">Waste containers regularly discharged</p> |
| 2. Remaining from Concrete washing pit is encased, but it there is no information that it was disposed according to WMP. Seems lots of concrete works are ahead proper concrete | | <p>Remaining from Concrete washing pit was removed and disposed at the landfill</p> |

| | | |
|--|---|--|
| washing pit must be organized | | |
| 3. |  |  <p style="text-align: center;">Wooden materials are removed from the construction area completely</p> |
| 4. Storage area for hazardous waste handling is prepared, but it is not managed properly |  |  <p style="text-align: center;">Hazardous wastes are placed at the Hazardous waste storage area</p> |
| 5. Not properly segregated waste is observed in waste containers | | <p>Construction site different waste streams are segregated at maximum extend</p> |

| | | |
|---|---|--|
| <p>6. Housekeeping have to be improved</p> |  | <p>Housekeeping issues are improved at the site</p> |
| <p>7. Smoking areas are marked, but they are not used, cigarette packs and butts are thrown all around the site. Additional training on this subject is needed</p> | | <p>Instruction was given to site workers how to manage waste at the site and avoid littering of the site</p> |
| <p>8. Waste Soil is dumped along the access road, according to SSEMP it should be removed, but based on the local population information this soil at the moment is protecting their property from flooding. Flooding may destroy site surroundings and in case if during the year similar to last year flooding will have place it is possible that site itself will be flooded. At the same time Client was requested to consider</p> |  | <p>Retaining wall extension design is under elaboration and agreement with the client</p> |
| <p>retaining wall along the channel to protect locals from possible flooding;</p> | | |
| <p>9. Construction waste possibly dumped by Local population is observed on waste soil along the access road. Access to the stored soil must be restricted and additional explanations to locals must be done. Also it is possible to inform local municipality that illegal waste area has appeared</p> |  | <p>Construction waste is placed out of the boundaries of the construction site. Accordingly contractor is not authorized to extend prevention measures</p> |
| <p>10. Prior to dumping top soil had to be removed. Only after removal and proper storage of top soil temporary dumping was allowed</p> |  | <p>Contractor is going to remove surplus soil for backfilling purposes as soon as possible</p> |
| <p>11. Storage area used by the project must be properly marked and warning signs must be provided at the location</p> | |  <p>Storage container is labeled</p> |

CORRECTIVE ACTION PLAN, MAR-02, 8 DECEMBER 2021

Corrective Action Plan, 8 December 2021

| Non-compliance point | Non-compliance photo | Corrective action photo |
|---|---|--|
| <p>1. Site internally should be better arranged, materials should be better segregated/stored and cleaned regularly</p> |  |  |

| | | |
|---|---|--|
| | |  |
| <p>2. Cable should be relocated to avoid any damages on users of power source; Unsafe connection to the power socket should be immediately improved</p> |  |  |
| <p>3. Concrete wash out pit should be arranged at construction site, "Concrete rivers" should be immediately removed from the soil</p> | | <p>New Concrete washout pit will be arranged at construction site shortly</p> |

4. Fuel and lubricants spill elimination items (sand, sawdust, special containers) should be stored at the construction site to avoid soil contamination



Oil spill kit is available at the site

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



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

Labour Conditions Inspection Department
Create Together Safe Working Environment

Annex №2

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

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

For further information, please contact:

☎ 15 05

☎ 116 001

StopCoV.ge

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



The staff must not appear in the workplace if they :

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

Employer’s responsibilities

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

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

Employees' responsibilities

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

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



2. These recommendations have been developed to be communicated to all employers, workers and stakeholders. Everyone is urged to regularly promote and adhere to this document;
3. Site inductions should be updated as required to include information on coronavirus (COVID-19) potential risks and workplace specific controls that have been implemented such as daily screening, health checks and symptoms of coronavirus (COVID-19), staggered start, finish and meal times, good hygiene practices and cleaning regimes and PPE requirements;
4. Toolbox talks should be regularly conducted, and workers are to be encouraged to put forward practical ideas for changing work practices to avoid the spread of coronavirus (COVID-19). Toolbox talks should also provide clarity to workers on leave arrangements for those that cannot work, and to encourage self-reporting and minimize the spread of risk;
5. Toolbox talks should also include updates from the responsible Health Officer as they occur and additional information on the severity of the pandemic and the importance of physical distancing at toolbox meetings.

15. Other measures

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

16. Vulnerable workers

1. Has been identified the following groups of people as vulnerable workers in relation to coronavirus (COVID-19):

- people over the age of 70;
 - people with chronic diseases (cardiovascular disease, diabetes, bronchial asthma and other respiratory diseases)
2. Where practical, reasonable action should be taken to minimize vulnerable workers from conducting higher risk roles.

17. Summary of recommendations and responsibility

| # | Activity | Responsible for implementation |
|-----|---|--------------------------------|
| 1. | To provide employees with the information about the work safety procedures and prevention of virus spread (guided by the recommendations of the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia and LEPL I. Sakvarelidze National Center for Disease Control and Public Health) | Employer |
| 2. | To place ads in the workspace about the COVID-19 and its preventive measures defined by the LEPL I. Sakvarelidze National Center for Disease Control and Public Health | Employer |
| 3. | To ensure maximum use of remote work in relation to those employees who can perform work remotely (administrative personnel) | Employer |
| 4. | To put mattings at the entrance of the lounge room / dining room, with the relevant sign of indication | Employer |
| 5. | To ensure hand washing at the workspace with appropriate soap and other hygiene products. In case of inability to wash hands, to provide with at least 70% alcohol- based hand cleaning liquids | Employer |
| 6. | To place hand sanitizers and the instruction for their proper use in a prominent place | Employer |
| 7. | To ensure that employees have access to hand sanitizers and know how to use them in accordance with the relevant instructions | Employer |
| 8. | To provide information to all staff and contractors, as well as cleaning staff, on appropriate preventive measures to avoid the spread of coronavirus in the work environment | Employer |
| 9. | To train the employees on the proper use of personal protective equipment and its subsequent storage / disposal | Employer |
| 10. | To provide employees with the necessary personal protective equipment (overalls, special shoes, helmet, gloves, medical mask) based on the specifics of their job and establish control over their use | Employer |
| 11. | Periodically, several times a day ensure natural ventilation of indoor spaces/closets | Employer |
| 12. | Periodically ensure disinfection of workplaces and frequently used equipment | Employer |
| 13. | To keep ergonomics in order at the construction site. To ensure the prompt cleaning of workspace and removal of construction waste | Employer |
| 14. | To ensure placement of closed containers for the disposable napkins and other hygiene waste used by both employees and visitors | Employer |
| 15. | Follow the rules of hygiene at your workplace | Employee |

| | | |
|-----|---|----------|
| 16. | Carry out the work process in accordance with the Emergency Action Plan defined by the employer / work safety manager | Employee |
| 17. | Avoid shaking hands and direct contact with others (touch, etc.) while saluting | Employee |
| 18. | Avoid gathering, the work of more than 10 people on one work platform at a safe distance (less than 2 m) is not recommended | Employee |
| 19. | When performing the work, make full use of the personal protective equipment provided by the employer | Employee |
| 20. | Clean the workplaces and the tools and equipment used during the work process with disinfectants | Employee |
| 21. | Thoroughly wash your hands with soap and water before and after eating, as well as before and the bathroom. Dry your hands thoroughly after washing | Employee |
| 22. | Use alcohol-based hand sanitizers in case if you are unable to wash and dry your hands | Employee |
| 23. | Keep a safe distance (not less than 1.5 m); | Employee |
| 24. | Cover your mouth with clean napkin or elbow when coughing and sneezing and then throw the used disposable napkin in the trash | Employee |
| 25. | Avoid touching your eyes, nose, or mouth with your hands. | Employee |

18. Informational banners for COVID -19

ახალი კორონავირუსი
[COVID-19]

დაიცავით ხელის ჰიგიენა რუსპირაციული ინფექციების თავიდან ასახილვლად

ხელებს ხილული დაბინძურების შემთხვევაში, დაიბანეთ საპნითა და გამდინარე წყლით



იმ შემთხვევაში, თუ ხელები მესამედად ზეფთაა, გამოიყენეთ ხელის დასამუშავებელი ხიორები მებეჭველი ხსნარით




World Health Organization
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ

NCDC.GE
ცხელი ხაზი: 116 001
07.02.2020

ახალი კორონავირუსი
[COVID-19]

როგორ უნდა გაიკეთოთ, მოხაროთ, მოხსნათ და გადაადგილოთ ნიღაბი

ნიღბის გაკეთებამდე დაიბანე ხელები საპნითა და წყლით ან დაიმუშავე სპირტისმემცველი ხსნარით



World Health Organization
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ

NCDC.GE
ცხელი ხაზი: 116 001
07.02.2020

ახალი კორონავირუსი
[COVID-19]

როგორ უნდა გაიკეთოთ, მოხაროთ, მოხსნათ და გადაადგილოთ ნიღაბი

ნიღაბი უნდა ფარავდეს ცხვირისა და პირის მიდამოს. დარწმუნდით, რომ ნიღაბი მჭიდროდაა მორგებული სახეზე



World Health Organization
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ
საქართველოს ექსპერტული ცენტრი COVID-19-ის შესახებ

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07.02.2020

ახალი კორონავირუსი
(2019-nCoV)

როგორ უნდა გავიკეთოთ, მოიხმაროთ, მოიხსნათ და გადააბოლოთ ნიღაბი

**მოხმარებისას არ შეეხოთ ნიღაბს;
შეხების შემთხვევაში, დაიბანეთ ხელები
საპნითა და წყლით ან დაიმუშავთ
სპირტისშემცველი ხსნარით.**



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📅 07.02.2020

ახალი კორონავირუსი
(2019-nCoV)

როგორ უნდა გავიკეთოთ, მოიხმაროთ, მოიხსნათ და გადააბოლოთ ნიღაბი

**ნიღბის მოხსნის წესი:
მოიხსენით ნიღაბი უკანა თავსმის მეშვეობით
(არ შეეხოთ ნიღბის წინა ნაწილს);
მოხსნისთანავე გადააგდეთ უახლოეს დახურულ ნაგვის
ურნაში; დაიბანეთ ხელები წყლითა და საპნით ან
დაიმუშავთ სპირტისშემცველი ხსნარით**



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📅 07.02.2020

ANNEX G: EMERGENCY RESPOCE PLAN, HILL



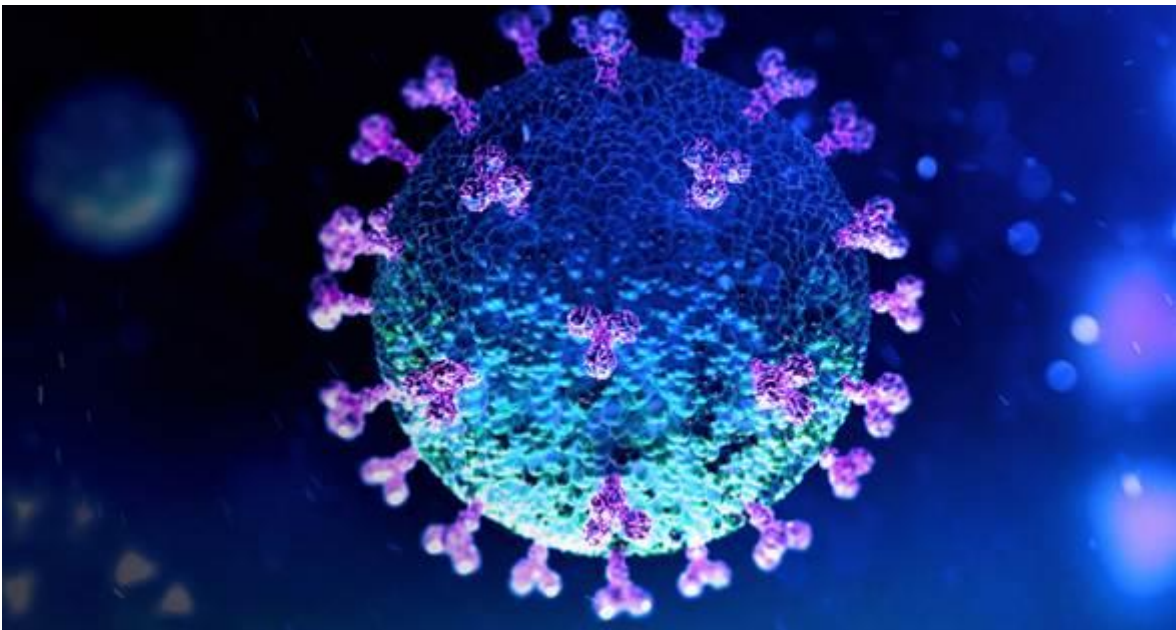
HILL



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

Financed by the Asian Development Bank and Government of Georgia

COVID-19 Emergency Management Plan in Construction Sector



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

For: Ministry of Regional Development & Infrastructure (MRDI)

United Water Supply Company of Georgia (UWSCG)

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1. PREAMBLE

A. 1.1 Project Description

1. 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.
2. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements will include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works will include sewer network, pumping stations, main collectors and waste water treatment plants.
3. Tranche 6 of the Investment Program includes:
 - Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01);
 - Construction of Waste Water Treatment Plant in Marneuli (MAR-02);
 - Construction of Water Supply System in Chiatura (CHI-01).

The following projects are financed under Tranche 6:

4. **Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01):** Mar-01 project envisages the rehabilitation and construction of reservoirs with the total capacity of 12,000M³=(2X3000+3X2000); construction of cast iron transmission pipeline with the diameter of 700 mm - 10 km and 600 mm – 4km; construction of network with Polyethylene pipes of OD 50 to OD 500. The project measures for the sewer network comprise the laying about 150 km new gravity pipes (DN 150 to DN 800) and 2.7 km new pressure pipes (OD 110 and OD 225). There will be 9 new wastewater pumping stations; 600mm to 1000 mm diameter inspection wells (concrete or polyethylene) and 400 mm diameter house connections (polyethylene). Proposed project envisages construction of sewerage system in Bolnisi which will work entirely by gravity (DN 200 and DN 250 HDPE pipes) and will be connected at 3 different points to the future DN 500 HDPE interceptor that will convey the collected sewer from Bolnisi to Marneuli WWTP.
5. Three separate IEEs were prepared for MAR-01 project: Improvement of Marneuli Water Supply System (August 2016); Improvement of Marneuli Wastewater System (August 2016); Improvement of Bolnisi Wastewater System (August 2016) and further updated and approved in January 2019 due to the finalization of the project design (please see para 3 above).
6. The contract No P43405-ICB-MAR-01 was signed on November 20, 2018 with "Akelik Group OJSC" (Azerbaijan). The date of completion of the contract is March 29, 2021.

7. **Construction of Waste Water Treatment Plant in Marneuli (MAR-02).** The project comprises of the construction of new Wastewater Treatment Plant in Marneuli with the capacity of 9,931 m³/day.
8. The contract No UWSCG-ICB-MAR-02-2019 was signed in October 18, 2019 with Joint venture of Toshiba Water Solutions Pvt. Ltd and IN-SI LLC (JV partner) (India/Georgia). The contract completion date is April 2021.
9. **Construction of Water Supply System in Chiatura (CHI-01).** The work under the CHI-01 project comprises the rehabilitation and construction of the water supply network, transmission pipeline and Reservoirs. In particular, Chi-01 project envisages construction of network in Chiatura and Navardzeti, construction of a transmission lines, the rehabilitation of existing reservoirs and construction of 2 new reservoirs one near the intake and one new reservoir in Bisi, construction of pumping stations and replacement of network pipelines, more detailed information is provided in chapter 31 below.
10. The contract No P43405-ICB-CHI-01 was signed on August 21, 2017 with “Akkord Industry Construction Investment Corporation” OJSC” (Azerbaijan), the initial completion date on April 15, 2019 was extended twice, for the first time until April 1, 2020, and then another 91 days until July 30.

B. 1.2 Coronavirus

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

II. 2. PURPOSE

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

III. 3. CONTROLLING RISKS ON SITE

13. To assist with providing and maintaining safe operations during coronavirus (COVID-19) the below measures should be implemented to assist in providing a safe and healthy environment at work.
 - Screening workers coming to site
 - Workplace Mapping
 - Physical Distancing
 - Hygiene
 - Shared Tools, Plant and Equipment
 - Cleaning and Disinfecting
 - Personnel Hoists
 - Personal Protective Equipment
 - Common Areas
 - Inspections
 - Travel
 - General Communications
 - Other measures
 - Vulnerable workers

A. 3.1 Screening workers coming to site

14. To minimize the risk of transmission of coronavirus (COVID-19) on site, employers must implement a two-phase screening process; phase one being an initial declaration and phase two on going daily screening.
15. Initial declaration is to be conducted by all workers (this includes any person who attends site), including current and new-starters. Each worker must provide a declaration that they to the best of their knowledge:
 - have not been diagnosed with coronavirus (COVID-19) in the last 14 days, or
 - are not in a period of 14 day quarantine as directed by a health professional, or
 - have not been overseas in the last 14 days, or
 - have not been in contact with anyone who has coronavirus (COVID-19), or
 - have not been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
 - do not have anyone in their household who has symptoms consistent with COVID-19.

16. Once the initial declaration has been made by the worker, ongoing screening (phase 2) should be conducted for every worker prior to the start of their shift, asking to the best of their knowledge:
 - have they been overseas in the last 14 days, or
 - have they been in contact with anyone who has coronavirus (COVID-19), or
 - have they been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
 - do they have anyone in their household who has symptoms consistent with COVID-19.
17. If a worker declares any of the above they may be required to self-isolate.
18. Screening should be conducted, whilst maintaining safe distances or over the phone before entering site, on a mobile app, via text message system, or other non-contact methods. It is advisable to have a system in place that limits the sharing of pens/ notebooks/ computers etc.
19. If a worker has recently had close contact with a confirmed case, they need to:
 - self-isolate at home for a period of 14 days and follow the self-isolation Guidelines
 - not attend work
 - contact their employer
 - seek urgent medical attention if they have symptoms consistent with COVID-19
 - not return to work until they have been cleared by a medical practitioner.
20. If a worker is experiencing symptoms consistent with COVID-19 or had close contact with a confirmed case, they must:
 - not attend work
 - contact their employer for further advice and;
 - not return to work until they have been cleared by a medical practitioner.

B. 3.2 Workplace Mapping

21. In the event of an employee being confirmed as having COVID-19, those who are potentially affected need to be quickly identified.
22. Employers should implement processes to record the schedule and work locations for workers that enables tracing of those who have come into contact with the confirmed case.
23. The record should include:
 - day and time work was undertaken
 - members of teams that worked together
 - specific work area on the construction site
 - any breaks taken, including time and location
24. Movement between sites, or areas within large sites, should be minimized as much as possible.
25. Where attending multiple sites is necessary (e.g. for HSRs, first aiders, emergency wardens) movement between sites should be recorded in the workplace mapping.

C. 3.3 Physical Distancing

26. Physical distancing of at least 1.5-2 meters should be implemented wherever possible. Employers should consider each work task and whether there is a safe alternative way to undertake the work with an increased distance between workers.
 - Mark safe distances in work, transit and break areas (e.g. on floors and walls).
 - Consider different shift patterns to minimize the number of workers onsite (e.g. AM/PM shifts).
 - Stagger start times, breaks and finish times to avoid congestion in high traffic areas and minimize workers coming into contact with each other as they move around the site.
 - Plan for how physical distancing will be maintained during inclement weather (e.g. use of lunch or crib rooms and amenities).
 - Install temporary physical barriers (e.g. fences, screens) between work areas, where appropriate.
27. Where it is not possible to undertake work tasks and maintain physical distancing, other control measures need to be implemented. For example:
 - Minimize the number of worker to worker interactions that need to be completed within 1.5 meters

- Minimize the number of workers involved in activities that need to occur within 1.5 meters of each other
 - Provide personal protective equipment (PPE) (e.g. gloves, masks, glasses).
28. Where essential work activities need to be undertaken in restricted spaces (e.g. lift shafts, personnel hoists, lifts), the number of workers working in the space should be minimized.

D. 3.4 Hygiene

29. Good hygiene practices and general cleaning helps with minimizing the spread of coronavirus (COVID-19). Employers should review general hygiene requirements and the cleaning regimes in place.
30. Employers should display health information in prominent locations on the construction site such as tea rooms, site offices, toilets, foyers, lifts and site entrances.
31. Every effort must be made by employers to upgrade personal hygiene and minimize worker to worker contact and all workers must co-operate in all necessary measures to achieve these objectives. These measures need to include:
- Promote regular hand washing with soap for at least 20 seconds. Employers must facilitate regular hand washing by providing ease of access/additional facilities where possible. Communicate to all workers where hand sanitizers are located and encourage their regular use.
 - Promote good cough etiquette by covering your cough and sneeze, or cough into your elbow or shoulder.
 - Avoid touching your nose, eyes or mouth.
 - Provide hand sanitizer and/or hand washing facilities with soap in all site entrances and exits hoists, amenities and areas/levels of the site.
32. Employers must ensure that workers have access to appropriate amenities. Employers should review and revise the number and locations of amenities, to reduce movement around the site.
33. Amenities need to include:
- Hand washing facilities (whether permanent or temporary), such as a wash basin, clean running water, soap and paper towels, placed in strategic locations to ensure employees can access them in a timely manner.
 - Access to hand sanitizer.
 - Rubbish bins with touch-free lids (e.g. foot pedal bins).
 - Thorough and regular sanitation.
 - Appropriate waste management systems.

E. 3.5 Shared tools, plant and equipment

34. Workers should avoid the shared use of tools, plant and equipment wherever possible. For example, drop saws, drills, grinders, ladders or elevating work platforms should not be used by more than one worker.
35. Where it is not possible to eliminate shared use:
- Provide cleaning products (e.g. alcohol spray or solution) where communal tools, plant and equipment are located.
 - Keep cleaning products with tools, plant and equipment as they move around the site.
 - Ensure all operators thoroughly wash or sanitize their hands before and after every use.
 - Ensure all parts of tools, plant and equipment (e.g. including handles, handrails) are wiped down before and after use.
36. The shared use of phones, desks, offices, computers and other devices should also be avoided. Where this is not possible, these items should be regularly disinfected.

F. 3.6 Cleaning and Disinfecting

37. Cleaning and disinfecting of surfaces is to be conducted using cleaning products as per DHHS Cleaning and Disinfection guidelines to reduce coronavirus (COVID-19) Transmission – the specific guidance is available here:
- Cleaning and disinfection of amenities and meal areas must occur between work group breaks
 - Cleaning and disinfection of Personnel Hoists should occur at the end of each hoist operator shift
 - Implement regular cleaning and disinfection (minimum of twice daily) to ‘Frequently Touched Surfaces’, surfaces such as toilets, door handles, stair handrails, light switches, lift buttons, table tops.
 - Additional cleaning/disinfecting on-site. There must be an increased frequency of industrial grade cleaning/additional cleaning/disinfecting on sites across all areas including particular emphasis on commonly touched/communal surfaces;

G. 3.7 Personnel hoists

38. Workers using hoists and lifts may be at greater risk of exposure to coronavirus (COVID-19), because they are required to be in close contact with others and potentially contaminated surfaces.
39. Control measures to reduce the risk in personnel hoists should include systems of work, physical distancing, personal hygiene, PPE and cleaning.
40. It is acknowledged that not all hoists and lifts are identical in size or dimension, and have varying weight limits.
41. Where it is not possible to implement physical distancing measures in a personnel hoist, all other available control measures need to be used.
42. Control measures may include:
- Limiting worker movement between levels and floors on site, where it is possible and safe to do so.
 - Reviewing which hoists are available for use on site and identifying if additional hoists can be used (for example where a partially occupied building is under construction, consider whether a residential lift be used solely for construction persons).
 - Physical distancing of 1.5-2 m and hygiene systems to be followed when waiting for hoist, particularly on floors where worker volumes may increase during peak times (start, break, finish times). For example the ground floor, floors with meal or break out spaces and floors with bathroom amenities.
 - Determine how many workers can use a hoist at any time (including hoist operator) taking into consideration the limited duration and additional control measures in these Guidelines.
 - Mark out hoist floor, identifying:
 - where workers stand
 - what direction they are to face when in the hoist to avoid face to face contact
 - Sequencing of entering and exiting
 - Mark the hoist waiting area at each floor ensuring the physical distancing is maintained
 - Regularly communicate and remind workers (e.g. through posters, digital displays):
 - diagram of positioning of workers and sequence of worker entering
 - not to touch walls/doors of the hoist
 - advise the cleaning regime in place
 - During peak periods have system in place to limit crowding of workers entering/exiting the work area. For example:
 - developing a schedule for use of the hoist
 - Staggering what floors workers are to use the hoists. Hoist operators may be exposed to additional risk. They should:
 - Be provided with PPE that protects them from worker to worker transmission and from touching contaminated surfaces (e.g. face shield or surgical mask/P2 respirator and glasses).
 - Perform frequent hand washing with soap and water or the application of hand sanitizer positioned within the hoist.
 - Where possible, change hoist operator every two hours into a different role.

H. 3.8 Personal Protective Equipment (PPE)

43. Employers must provide information, instruction and training on the safe use, decontamination and maintenance of any PPE provided.
44. Any PPE provided needs to be practical for the work environment (e.g. allowing the necessary visibility and mobility) and properly decontaminated or disposed of at the end of every shift.
45. Employers should monitor and encourage correct use of PPE, for example providing information on posters and digital screens about:
 - Washing or sanitizing hands before putting PPE on, and putting face protection on before gloves
 - Removing gloves before face protection, washing or sanitizing hands after removing PPE and decontaminating or disposing of used PPE safely.

I. 3.9 Common areas

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

J. 3.10 Inspections

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

K. 3.11 Travel

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

L. 3.12 General Communication

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

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

M. 3.14 Other measures

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

N. 3.15 Vulnerable workers

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

IV. 4. SUMMARY OF RECOMMENDATIONS AND RESPONSIBILITY

Table of Summary of recommendations and responsibility

| Activity | Responsible for implementation |
|--|--------------------------------|
| To provide employees with the information about the work safety procedures and prevention of virus spread (guided by the recommendations of the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia and LEPL L. Sakvarelidze National Center for Disease Control and Public Health); | Employer |
| To place ads in the workspace about the COVID-19 and its preventive measures defined by the LEPL I. Sakvarelidze National Center for Disease Control and Public Health; | Employer |
| To ensure maximum use of remote work in relation to those employees who can perform work remotely (administrative personnel); | Employer |
| To put mattings at the entrance of the lounge room / dining room, with the relevant sign of | Employer |

| | |
|---|----------|
| indication; | |
| To ensure hand washing at the workspace with appropriate soap and other hygiene products. In case of inability to wash hands, to provide with at least 70% alcohol-based hand cleaning liquids; | Employer |
| To place hand sanitizers and the instruction for their proper use in a prominent place; | Employer |
| To ensure that employees have access to hand sanitizers and know how to use them in accordance with the relevant instructions; | Employer |
| To provide information to all staff and contractors, as well as cleaning staff, on appropriate preventive measures to avoid the spread of coronavirus in the work environment; | Employer |
| To train the employees on the proper use of personal protective equipment and its subsequent storage / disposal; | Employer |
| To provide employees with the necessary personal protective equipment (overalls, special shoes, helmet, gloves, medical mask) based on the specifics of their job and establish control over their use; | Employer |
| Periodically, several times a day ensure natural ventilation of indoor spaces / closets; | Employer |
| Periodically ensure disinfection of workplaces and frequently used equipment; | Employer |
| To keep ergonomics in order at the construction site. To ensure the prompt cleaning of workspace and removal of construction waste. | Employer |
| To ensure placement of closed containers for the disposable napkins and other hygiene waste used by both employees and visitors. | Employer |
| Follow the rules of hygiene at your workplace; | Employee |
| Carry out the work process in accordance with the Emergency Action Plan defined by the employer / work safety manager; | Employee |
| Avoid shaking hands and direct contact with others (touch, etc.) while saluting; | Employee |
| Avoid gathering, the work of more than 10 people on one work platform at a safe distance (less than 2 m) is not recommended; | Employee |
| When performing the work, make full use of the personal protective equipment provided by the employer; | Employee |
| Clean the workplaces and the tools and equipment used during the work process with disinfectants; | Employee |
| Thoroughly wash your hands with soap and water before and after eating, as well as before and the bathroom. Dry your hands thoroughly after washing; | Employee |
| Use alcohol-based hand sanitizers in case if you are unable to wash and dry your hands; | Employee |
| Keep a safe distance (not less than 2 m); | Employee |
| Cover your mouth with clean napkin or elbow when coughing and sneezing and then throw the used disposable napkin in the trash; | Employee |
| Avoid touching your eyes, nose, or mouth with your hands. | Employee |

V. 5. COVID-19 INFORMATIONAL BANNERS

| | | |
|---|--|--|
| <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ უნდა ბაიკეთოთ, მოინახროთ, მოინახლოთ და გადმოხადოთ</p> <p>ნიღბის გაკეთებამდე დაიბანეთ ხელები საპნითა და წყლით ან დაიშუშეთ სპირტისშემცველი ხსნარით</p>  <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ უნდა ბაიკეთოთ, მოინახროთ, მოინახლოთ და გადმოხადოთ</p> <p>მოხმარებისას არ შეეხოთ ნიღბის შებენი ნაწილებს, დაიბანეთ ხელები საპნითა და წყლით ან დაიშუშეთ სპირტისშემცველი ხსნარით</p>  <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ უნდა ბაიკეთოთ, მოინახროთ, მოინახლოთ და გადმოხადოთ</p> <p>ნიღაბი უნდა ფარავდეს ცხვირისა და პირის მიდამოს. დარწმუნდით, რომ ნიღაბი მჭიდროდაა მორგებული სახეზე</p>  <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 13.02.2020</p> |
| <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ უნდა ბაიკეთოთ, მოინახროთ, მოინახლოთ და გადმოხადოთ</p> <p>დაბინძურებისთანავე შეცვალეთ ნიღაბი ახლით; არ გამოიყენოთ ერთჯერადი ნიღაბი განმეორებით;</p>  <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>NCDC.GE ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ უნდა ბაიკეთოთ, მოინახროთ, მოინახლოთ და გადმოხადოთ</p> <p>ნიღბის მოხსნის წესი: მოიხსენით ნიღაბი უკანა თავის მიმართულებით (არ შეეხოთ ნიღბის წინა ნაწილს); მოხსნისთანავე გადაადგილეთ უაბლოგო დასურთ ნიღაბს ურნაში; დაიბანეთ ხელები წყლითა და საპნით ან დაიშუშეთ სპირტისშემცველი ხსნარით</p>  <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>NCDC.GE ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>შეინარჩუნეთ ჯანმრთელობა სამუშაო ადგილზე</p> <p>ხშირად დაიბანეთ ხელები</p>   <p>ხელის და ცხვირის იდგარეთ პირსა და ცხვირზე ერთჯერადი ცხვირბახოცი ან მოხრილი იდგარი ცხვირბახოცი გამოიყენებინათვე გადაადგილეთ ურნაში და დაეფარებოდეთ დაიბანეთ ხელები</p> <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>NCDC.GE ცხელი ხაზი: 116 001 29.02.2020</p> |
| <p>ახალი კორონავირუსი (COVID-19)</p> <p>სამუშაო ადგილებზე ახალი კორონავირუსის გავრცელების პრევენციის მიზნით #COVID-19</p>  <p>რეგულარულად გაწმენდა სადემონსტრაციო ხსნარების შედარებით (მაგ., სპირტი და სანეირი შაბრები) და სანეირი შაბრები (მაგ., ტელეფონები) კლასიკური</p> <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>როგორ მოახდინოთ ახალი კორონავირუსის გავრცელების პრევენცია სამუშაო ადგილზე</p> <p>დაეფარეთ იდგარები თანამშრომლებს, კორტრეაქტორებს და მომსახურებლებს</p> <ul style="list-style-type: none"> შეინარჩუნეთ სიხუფთავე და პიკეტა სამუშაო ადგილებზე ხელი შეუწყვეთ ოფიცებსა და სამუშაო ხელუბის რეგულარული დაბანის და აბაზანებზე რეზიპირაციული პიკეტის დაყვას ხელი შეუწყვეთ რეზიპირაციული პიკეტის დაყვას სამსახურებრივ მივლინებამდე გაიარეთ შეხებაში კონსულტაცია მოგზაურობის დაგეგმვით სამოგადოებაში COVID-19 გავრცელებების შემთხვევაში, ავადმყოფ პირებს ურთივე სახლში <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 13.02.2020</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>ფაქტი:</p> <p>ახალი კორონავირუსით დაინფიცირების რისკი მოწინააღმდეგე, ბანკნოტებზე, საკრედიტო ბარათებსა და სხვა საგნებზე ხელის შეხებით, ძალიან დაბალია.</p> <p>ხელის ხშირად გახუფთაობისას, ახალი კორონავირუსით დაინფიცირების რისკი მოწინააღმდეგე, ბანკნოტებსა და საკრედიტო ბარათებზე ხელით შეხებით, ძალიან დაბალია.</p> <p>საკუთარ თავს დაცვა ხელის ხშირი დაბანა საპნითა და წყლით ხელის დამუშავება სპირტის შემცველი ხსნარით.</p> <p>შესაძლოა, საგანი იყოს დაბინძურებული ახალი კორონავირუსით დაინფიცირებული ადამიანის მიერ ხელის ან ცხვირის ცხვირის საგანზე შეხებით. წინასწარი ინფორმაციით, ახალი კორონავირუსი სიფლუსისუნარიანობას წედაპირებზე იწინებს რამდენიმე საათამდე.</p> <p>საქართველოს ექსპერტთა ჯგუფი საერთაშორისო ჯანდაცვის ორგანიზაცია საერთაშორისო კვლევის ცენტრი</p> <p>World Health Organization</p> <p>ცხელი ხაზი: 116 001 29.02.2020</p> |

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| <p>ახალი კორონავირუსი (COVID-19)</p> <p>შავში კორონავირუსით დაინფიცირება</p> <p>დაიბანეთ ხელები საპნითა და გამძინარე ან გამოიყენეთ ხელის დასაშუშავებელი სემცველი ხსნარი</p> <p>ხელის და ცემინებისას აიფარეთ პირსა და ცხვირს ეროვნული ცხვირსახოცი ან მოხრილი იდაყვი</p> <p>მოერიდეთ კონტაქტს პირებთან, რომლებსაც აქვთ სურდო ან გრიპის შესავსი სხვა სიმპტომები</p> <p>მიიღეთ თერმულად კარგად დასაშუშავებელი ხორციის პროდუქტები და კვერცხი</p> <p>მოერიდეთ დაუცველ და შვიდრო კონტაქტს გარეულ ან/და ფერის ცხოველებთან</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>დაიცავით გარემომცხოვრება დაინფიცირებისგან</p> <p>ხელის და ცემინებისას აიფარეთ პირსა და ცხვირზე ეროვნული ცხვირსახოცი ან მოხრილი იდაყვი</p> <p>ცხვირსახოცი გამოყენებისთანავე ურნაში გადააგდეთ</p> <p>ცემინების, ხელის ან ავადმყოფთან კონტაქტის შემდეგ დაიბანეთ ხელები საპნითა და წყლით ან გამოიყენეთ ხელის დასაშუშავებელი სპირტის შემცველი ხსნარი</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>დაიცავით თავი და გარემომცხოვრება დაინფიცირებისგან - დაიბანეთ ხელში:</p> <ul style="list-style-type: none"> • ხელის და/ან ცემინების • ავადმყოფის მოვლისას • საკვების მომზადებამდე, მომზადების დროს და შემდეგ • საკვების მიღებამდე • ტუალეტით სარგებლობის შემდეგ • ცხოველებთან ან მათს ექსკრემენტებთან შეხების შემდეგ <p>World Health Organization</p> |
| <p>ახალი კორონავირუსი (COVID-19)</p> <p>დაიცავით გარემომცხოვრება დაინფიცირებისგან</p> <p>თუ გაქვთ მაღალი ტემპერატურა, ხველა, მოერიდეთ გარემომცხოვრებას და დაიბანეთ ხელები საპნითა და წყლით ან გამოიყენეთ ხელის დასაშუშავებელი სპირტის შემცველი ხსნარი</p> <p>მოერიდეთ ხამოგადობებში გადაფურთხებას</p> <p>მაღალი ტემპერატურის, ხველის, ხველა და ხველა შემთხვევაში, დროულად მიმართეთ სამედიცინო დახმებას</p> <p>აგნობეთ ექიმს თქვენი სოციალური ისტორია</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>დაიცავით ხელის ჰიგიენა რეგულარული ინფორმაციის მიწოდებით თავიდან ასაცილებლად</p> <p>ხელების ხელული დაბინძურების შემთხვევაში, დაიბანეთ ხელები საპნითა და გამძინარე წყლით</p> <p>იმ შემთხვევაში, თუ ხელის დასაშუშავებელი სპირტის შემცველი ხსნარი</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>შესაძლებელია თუ არა მართლმადიდებელი წყლით ან სხვა საშუალებებით ცხვირის რეგულარული გამორეცხვა ახალი კორონავირუსის (2019-nCoV) ინფიცირებისგან</p> <p>არ არსებობს მტკიცებულება იმის შესახებ, რომ ცხვირის რეგულარული გამორეცხვა მართლმადიდებელი წყლით იცავს ახალი კორონავირუსის (2019-nCoV) ინფიცირებისგან.</p> <p>არსებობს მწირი ინფორმაცია იმის შესახებ, რომ ცხვირის რეგულარული გამორეცხვა მართლმადიდებელი წყლით ეხმარება ადამიანებს გაციების შედარებით სწრაფად დამარცხებაში.</p> <p>თუმცა, ცხვირის რეგულარული გამორეცხვა მართლმადიდებელი წყლით ეხმარება რეგულარული ინფიცირების ეფექტურ პრევენციასა და მკურნალობას.</p> <p>World Health Organization</p> |
| <p>ახალი კორონავირუსი (COVID-19)</p> <p>იყავით დაცული #კორონავირუსისგან</p> <p>თუ ხართ 60+ წლის ან გაქვთ ქრონიკული დაავადებები, თქვენ უნდა იყოთ განსაკუთრებით ყურადღებიანი იყავით დაცული:</p> <ul style="list-style-type: none"> • გულ-ხსხლძარღვთა დაავადებები • სასუნთქი სისტემის მდგომარეობები • დიაბეტი <p>მოერიდეთ ხალხურ ადგილებს ან ისეთ ადგილებს სადაც შეხებაა ადამიანებთან და დაავადებულ პირებს და მიეცით ქრონიკული დაავადების მქონე პირებს დახმება</p> <p>გაიგეთ მეტი, რათა იყოთ მზად ახალი კორონავირუსისგან: #COVID-19 stopcov.ge; ncdc.ge; moh.gov.ge; who.int/covid</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>იყავით გონიერი და თუ გაუვით სუნთქვის უკაბრი</p> <p>დაურავთ ექიმს</p> <p>დაულოებლად მიმართეთ სამედიცინო დახმებას მისაღებად</p> <p>გაიგეთ მეტი, რათა იყოთ მზად ახალი კორონავირუსისგან: #COVID-19 stopcov.ge; ncdc.ge; moh.gov.ge; who.int/covid</p> <p>World Health Organization</p> | <p>ახალი კორონავირუსი (COVID-19)</p> <p>იყავით გონიერი და მიიღეთ ინფორმაცია #კორონავირუსისგან</p> <ul style="list-style-type: none"> • მიეცით განმარტებული და დაავადებათა კონტროლის ცენტრის ვებ რესურსები • თვალის ადვილი კორონავირუსის შესახებ ასაკობრივად შესაბამის ინფორმაციას • ჭორების გავრცელების თავიდან ასაცილებლად, ყოველთვის შეამოწმეთ წყარო სადაცაც მიიღებთ ინფორმაციას • არ გაავრცელოთ ჭორები <p>გაიგეთ მეტი, რათა იყოთ მზად ახალი კორონავირუსისგან: #COVID-19 stopcov.ge; ncdc.ge; moh.gov.ge; who.int/covid</p> <p>World Health Organization</p> |

ახალი კორონავირუსი (COVID-19)

მოსახლეობის უმეტესი ნაწილი უკვე აღმოაჩინა COVID-19-ის დაავადება.

დაიცავით სისუფთავის ჰიგიენის საშუალო ადგილები.



უზრუნველყავით ხელის რეგულარული და სავსე დაბანა.

ხელი შეეწყვიტეთ რეზპირატორების დაგვანა.

გააუქმეთ მივლინების შესაძლებლობა.

აუცილებლობის შემთხვევაში, გაეცხით იმ ქვეყანაში არსებულ COVID-19-ის შემთხვევებთან დაკავშირებით.

მათ ვინც ავად არიან დაარჩენ ხალხში.

ახალი კორონავირუსი (COVID-19)

იყავით გულიხშიერი რამაც დააბარცხოთ შიში #კორონავირუსი

- მოიკითხეთ ახლობლები, განსაკუთრებით ვინაე შეეხო ინფექცია
- წააბალისებთ აკეთონ ის რაც უფრო
- გაამიარეთ განმრთვლობის მსოფლიო ორგანიზაციისა და დაავადებათა კონტროლის მიერ მონიშნებული ინფორმაცია
- მიეცით ბავშვებს მშვიდი და სწორი რჩევა

გაიგეთ მეტი, რათა იყოთ მზად ახალი კორონავირუსის #COVID-19 stopcov.ge; ncdc.ge; moh.gov.ge; who.int




ახალი კორონავირუსი (COVID-19)

იყავით გულიხშიერი რამაც დააბარცხოთ შიში #კორონავირუსი

- გამოსხიეთ თანადგომა დახარალებულების მიმართ
- გაიგეთ მეტი დაავადების შესახებ რათა სწორად შეაფასოთ რისკები
- მიიღეთ უსაფრთხოების პრაქტიკული ზომები

გაიგეთ მეტი, რათა იყოთ მზად ახალი კორონავირუსის #COVID-19 stopcov.ge; ncdc.ge; moh.gov.ge; who.int







ახალი კორონავირუსი (COVID-19)

სარსათის უვნებლობის კრავთიკული ნიშნები

გამოიყენეთ სხვადასხვა სატრელები დაფა და დანები საკვების მომზადებისას, უმი ხორცისა და მზა კერძისათვის



დაიბანეთ ხელები უმი ან თერმულად დაამუშავებთან შეხების შემდეგ

ახალი კორონავირუსი (COVID-19)

არის ალკოჰოლის მიღება ახალი კორონავირუსის დასაცავად?

არა, ალკოჰოლის მოხმარება არ იცავს ადამიანს ახალი კორონავირუსული (COVID-19) ინფექციისგან. ალკოჰოლი ყოველთვის უნდა მოიხმაროთ ზომიერად, ხოლო ადამიანებმა, რომლებიც არ სვამენ ალკოჰოლს, არ უნდა დაიწყონ დალევა ახალი კორონავირუსული ინფექციისგან თავის დასაცავად.

ახალი კორონავირუსი (COVID-19)

სარსათის უვნებლობის კრავთიკული ნიშნები

იმ ადგილებშიც კი, სადაც ემიდაფუთებაა, ხორცის პროდუქტების მიღება უსაფრთხოა, თუ პროდუქტები თერმულად კარგად არის დამუშავებული და საკვების მომზადების წესები ხათანადოდაა დაცული



