

Semi-annual Environmental Monitoring Report

Project Number: **3524-GEO**

Reporting time period:

July - December 2020

Georgia: Rehabilitation of Dzirula–Kharagauli–Moliti–Pona–Chumateleti Secondary Road Section (50Km)

Financed by the Asian Development Bank

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For:

Roads Department of the
Ministry of Regional Development and
Infrastructure of Georgia

Endorsed by:

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March 2021

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ACRONYMS & ABBREVIATIONS

ADB	Asian Development Bank
SEMP	Specific Environmental Management Plan
RD	Roads Department
DNP	Defects Notification Period
EA	Executing agency
EMP	Environmental Management Plan
EMS	Environmental Management System
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IEE	Initial Environmental Examination
km	Kilometer
Ministry	Ministry of National Development and Infrastructure
PCU	Project Coordination Unit
PIU	Project Implementation Unit
PMU	Project Management Unit
SSEMP	Site Specific Environmental Management Plan
TOR	Terms of Reference

Table of Contents

	Page
1 INTRODUCTION	6
1.1 Preamble	6
1.2 Headline Information	6
2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES	6
2.1 Project Description	6
2.2 Project Contracts and Management	9
2.3 Project Activities During Current Reporting Period	11
2.4 Description of Any Changes to Project Design	15
2.5 Description of Any Changes to Agreed Construction Methods	16
3 ENVIRONMENTAL SAFEGUARD ACTIVITIES	17
3.1 General Description of Environmental Safeguard Activities	17
3.2 Site Audits	17
3.3 Issues Tracking (Based on Non-Conformance Notices)	20
3.4 Trends	21
3.5 Unanticipated Environmental Impacts or Risks	21
4 RESULTS OF ENVIRONMENTAL MONITORING	22
4.1 Overview of Monitoring Conducted during Current Period	22
4.2 Trends	23
4.3 Summary of Monitoring Outcomes	23
4.4 Material Resources Utilisation	24
4.4.1 Current Period	26
4.4.2 Cumulative Resource Utilisation	26
4.5 Waste Management	26
4.5.1 Current Period	26
4.5.2 Cumulative Waste Generation	26
4.6 Health and Safety	26
4.6.1 Community Health and Safety	26
4.6.2 Worker Safety and Health	26
4.7 Training	26
4.8 Grievance Redress Mechanism	27
5 FUNCTIONING OF THE SEMP	28

<u>5.1</u>	<u>SEMP Review</u>	28
<u>6</u>	<u>GOOD PRACTICE AND OPPORTUNITYFOR IMPROVEMENT</u>	29
<u>6.1</u>	<u>Good Practice</u>	29
<u>6.2</u>	<u>Opportunities for Improvement</u>	29
<u>7</u>	<u>SUMMARYAND RECOMMENDATIONS</u>	30
<u>7.1</u>	<u>Summary</u>	30
<u>7.2</u>	<u>Recommendations</u>	30

Annexes:

Annex 1 – Site Photos

Annex 2 - Non-Compliance Notice

Annex 3 -Complaints

Annex4 - Parametric Measurements

1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi-annual Environmental Monitoring Review of Rehabilitation of Dzirula – Kharagauli – Moliti – Pona – Chumateleti Secondary Road Section (50Km).
2. This report is the fifth Semi-annual EMR for the project.

1.2 Head line Information

3. Project design review and construction activities have been commenced in September 18, 2018 (BSG LOT1). There is protected area near the project related road section. The shortest distance between Borjomi-Kharagauli National Park (BKNP) and the existing project road is approximately 1.3 km. BKNP is separated from the existing project by a river gorge, which prevent the transposition of flora and fauna. Therefore, the project will have no direct impacts on the biodiversity of the BKNP. However, construction contractor should select appropriate access roads to avoid disturbance of the protected area and provide site staff with special training to prevent poaching.
4. Second Contractor “AKKORD ICIC” (Lot 2) started mobilization and set up office at Chumateleti and their activity started on 31st May 2019.
5. Some non-compliances have been identified during the reporting time period. Appropriate corrective action plans have been elaborated and implemented. The non-compliances detected during HSE inspections were recorded and photos taken.
6. It is envisioned, that the road, when improved, will enhance connectivity to a number of towns and villages at the foothills of the mountain ranges and will act as alternate route to parallel segments along E60. Also, positive impact of the project is local population’s involvement in the road construction process.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

7. The project road is a 50.244 km west to east secondary road, starting from E-60 in Dzirula and ending at E-60 junction at Chumateleti. Most of the project road is within Imereti Region with a few kilometers within Shida Kartli Region, through a gorge with mountain ranges with on both the northern and southern part. It is envisioned that this road, when improved, will enhance connectivity to a number of towns and villages at the foothills of the mountain ranges and can act as alternate route to parallel segments along E-60.
8. For implementation purposes the project was divided into 2 separate sections (lots) of about 25 km each. First section (Lot 1) (Construction Contractor: Black Sea Group) covers above road from Dzirula (km0+000) to Moliti (km 24+620). The details of the proposed road project are:
 - Rehabilitate and pavement of the project road from Dzirula to Kharagauli according to Georgian National Standard for Public Motor Roads (SSTGzebi 2009), Geometrical and

Structural Requirements with 40 km/h design speed. The pavement within Kharagauli town is planned to execute minimum 4cm asphalt surface course after milling over the area.

- Replacement or repairing of 9 bridges and 102 culverts.
- Construction of side drains and other drainage structures.
- Provision of retaining walls and river protection measures, where necessary.
- Provision of adequate road signing and marking.
- Provision of safety barriers.

9. Second section (Lot 2) (Construction Contractor: Akkord ICIC) covers the above road from Moliti (km 24+620) to Chumateleti (km 50+244). The details of the proposed road section are:

- Rehabilitation and pavement of the project road from Moliti to Chumateleti according to Georgian National Standard for Public Motor Roads (SST Gzebi 2009), Geometrical and Structural Requirements with a design speed of 40km/h.
- Construction of 13 new bridges
- Construction of 86 pipe culverts and 6 box culverts.
- Construction of side drains and other drainage structures.
- Provision of retaining walls and river protection measures, where necessary.
- Provision of adequate road signing and marking.
- Provision of safety barriers.

10. AKKORD ICIC has been selected as the Construction Contractor for LOT 2 (Km 24+620 - Km 50+244), agreement has been concluded 04.12.2018. Mobilization is ongoing (started in June 2019), construction activities are commenced but far behind planned schedule.

11. The road is to be designed according to Georgian geometric design standard, and accordingly, it shall be sufficient to carry the traffic loading efficiently and with the vehicles from the opposite directions can pass safely. The design elements for the cross section of the two-lane road are as follows:

- | | |
|--------------------------------------|-----------------------------------|
| • Number of lanes: | 2 |
| • Lane width: | 3.00 m |
| • Carriage way width: | 6.00m |
| • Width of shoulder: | 1.00 m (of which 0.50 m is paved) |
| • Increase of shoulder on embankment | 0.50m |
| • Total road width: | 9.00m |

12. The preliminary road design was carried out considering following design philosophy.

- The standards to be applied will follow the Georgian geometric design standard for the selected design speed of 40 km/h, with some flexibility in application when the strict application of the standards would result in an excessively costly technical solution.
- In general, the design follows the existing alignment wherever possible and considers the existing structures. Where the existing alignment does not correspond to the proposed parameters, certain improvements depending on topography, presence of built-up areas and structures are considered.
- The vertical alignment has been maintained in general, with improvements to the sight distances, where the existing topography allow for improvements. To accommodate new pavement layers, the road elevations have increased accordingly where possible.
- The design will result in a cost effective construction, considering the low traffic volumes on the road and the economic viability of the design.

13. The map of the project road is given in the **Figure 1** below.

Fig. 1: Map of Project Road

Figure 1: Location Map of the Project Road



13. The project is classified as category B for the environment under ADB's Safeguard Policy Statement (2009). Project implementation periods: 2018-2020. The Extension of Time for Completion has been decided by the Amendment No.6 (20th October 2020) that is extended up to 22nd May 2021 as same as Engineer reported his review by its letter No. PEC/RD/DCSRS/20-269 dated on 11th September 2020. On 1st December of 2020, Contractor sent a letter (No.DZM/BSG-OUT-MNG-COR-0257) attached with signed Amendment No.6 dated on 20th October of 2020 in which he stated, that even he signed the Amendment No.6 but the works cannot be completed by 22nd May 2021 and an additional time extension will be necessary.

14. The current Semi-annual Environmental Monitoring Report covers the period from July 2020 to December 2020.

2.2 Project Contracts and Management

15. Consultancy Services (CS) Contract was awarded to JV of Pyunghwa Engineering Consultants Ltd, Yoshin Engineering Corporation and Roads Rehabilitation and Modernization Supervision Direction Ltd for three phases of the project:

- a. Phase 1–Design review, to be completed in a period of five weeks.
- b. Phase 2–Construction Supervision and Project Management. The period is for 33months.
- c. Phase 3–Defects Notification Period, two years (24months).

16. The TOR for the Consultancy Contract contains the following tasks for the Environmental Specialists:

- Ensure that the provisions of the approved Environmental Management Plan are reflected in the Contractor's contract site environmental management plan (SEMP) prior to its acceptance by the Engineer, the Employer and ADB, and there after ensure that the Contractor complies in every respect with the provisions of the SEMP;
- Develop an environmental auditing protocol for the construction period, regularly supervise the environmental monitoring, and submit periodic reports based on the monitoring data and laboratory analysis reports. These reports will be included as an annex to the Consultant's Monthly Report;
- Develop a program for hands-on training of Contractor's staff in implementing the SEMP. Conduct Post-Construction Environmental Audit and prepare post-construction environmental audit report with filled environmental audit checklist.

17. All mitigation measures during construction are implemented respectively by the contractor companies: Black Sea Group LTD and AKKORD ICIC. Each contractor company have environmental and safety officers responsible for HSE issues during construction process. Construction companies are monitored by the supervision consultant (PYUNGHWA) environmental specialist – Shalva Bosikashvili and Environmental Specialist of RD ADB Ms. Luiza Bubashvili. Environmental Specialists of SC and RD conducted routine observations and surveys of project sites. Oleg Tabatadze HS Manager - Akkord, Nikoloz Jashiashvili HS Manager – BSG, who are responsible for occupational health and safety issues.

18. The Contractor, prior to the onset of the construction, is obliged to conduct a number of studies and develop environmental plans, including "Site-specific Environment Management Plan" (SEMP). Such plans can be further subdivided into Topic Specific or Location Specific EMP's. The number of such plans will depend upon the type of project, complexity and sensitivity of the receiving environment.

19. Topic Specific EMPs are developed on a topic by topic basis. For example:

- Waste Management Plan;
- Traffic Management Plan;
- Protected Species Management Plan;
- Water Management Plan and Etc.

20. These plans are detailed and set out how the project will address potential issues identified in the impact assessment process and ensure that specific mitigation and monitoring measures are fully implemented. A topic specific environmental management plan will cover the entire project.

21. The names and contact details of environmental staff involved in the environmental management are presented in the **Table 1** below:

Table 1: Description of staff involved in environmental management

Organization	Position	Name	Nationality	Tenure
Construction Contractor Akkord	Environmental Specialist	Farid Bairamov 595909638 Farid.bairamov@inbox.ru	Azeri	16 months
Construction Contractor BSG	Environmental Specialist	Ketevan Nadirashvili 577 992959 Ketevan_Nadirashvili@BCGcom.ge	Georgian	16 months
Supervision Consultant Pyunghwa Engineering Consultants Ltd, Yoshin Engineering Corporation and Roads Rehabilitation and Modernization Supervision Direction Ltd	Environmental Specialist	ShalvaBosikashvilisbosikashvili@yahoo.com 595 116041 Cell Phone	Georgian	16 months
ADB/RM	Head Office, Environmental Specialist, Portfolio, Results, Safeguards and Gender Unit (PSG), CWRD.	Ninette R. Pajarillaga E-mail: npajarillaga@adb.org		

	ADB/RETA International Environmental Safeguards Consultant	Keti Dgebuadze Tel: +995 322 250619 Mob: +995 577 232937 E-mail: ketdgeb@yahoo.com kdgebuadze.consultant@adb.org	Georgian
	Associate		
	Safeguards	Nino Nadashvili	Georgian
	Officer	+995 595 070442	
	Georgia Resident Mission	nnadashvili@adb.org	
	Asian		
	Development		
	Bank		
Roads	Environmental	Luiza Bubashvili	Georgian
Department	Safeguard	Cell:+995595219141	
PIU	Consultant	Web: www.georoad.ge	
	under ADB &	likabubashvili@yahoo.com	
	EIB financed		
	Projects		

22. Construction Contractor for first lot (km 0+000 to km 24+620) is “Black Sea Group” LTD, for thesecond lot is “AKKORD ICIC” (km 24+620 to km50+244).

2.3 Project Activities during the Current Reporting Period

23. Contract for the consultant’s services signed on 01.08.2018, construction activities have been commenced on 18.09.2018 for Lot 1.

24. Construction activities are ongoing, camp sites in Kharagauli and Sagandzile established (LOT1), retaining walls, precast of concrete blocks production and installation and pavement works are in progress. The accumulative progress of works as of the end of 2020 shows 66.38% as actual progress against 71.63% as planned progress which is being delayed.

25. For the second lot (Lot 2) retaining walls, precast of concrete blocks production and installation and pavement works are ongoing, construction contractor AKKORD ICIC established camp in Chumateleti area. The accumulative progress of works as of the end of 2020 shows 10.68% as actual progress against 51.53% as planned progress which is far behind progress.

26. Site HSE inspections for construction works have been carried out since very beginning of the project. Progress of the works is given in the Table 2 below. (**Table A** shows an achieved amount of works based on Bill of Quantities. **Table B** shows actual detailed work progress)

Table 2: PROGRESS OF THE WORK, LOT 1 (BSG)

Progress of Work (A)

No.	Description	Weight Rate (%)	Monthly Progress (%), Dec. 2020		
			Plan	Actual	Comparison
1	General	1.52	0.01	0.00	
2	Setting out & Site Clearance	7.17	0.12	0.00	
3	Earthworks	4.52	0.12	0.00	
4	Culverts and Drainage Works	20.75	0.00	0.00	
5	Pavements	18.98	0.25	0.00	
6	Retaining Structure	35.29	0.29	0.00	
7	Junctions and Private Entrances	0.85	0.10	0.00	
8	Road Furniture & Road Markings	5.48	0.00	0.00	
9	Bridge Construction	2.59	0.00	0.00	
10	Rehabilitation of Existing Bridges	0.81	0.00	0.00	
11	Miscellaneous	2.03	0.00	0.00	
12	Material on Site	0	0.00	0.00	
13	Variation Order			0.00	
Total		100.00%	0.89%	0.00%	-0.89%

Progress of Works (B)

As of End of December 2020

No	Description	Total Place (Ea)	Total Length (m)	Completed (Except back fill)			In progress			No commenced			Remarks
				Place (Ea)	Length (m)	%	Place (Ea)	Length (m)	%	Place (Ea)	Length (m)	%	
1	Pipe (D=1000 mm)	61	758.9	60	748.8	99%	-	-	0%	1	10.1	1%	km2+612
2	Pipe (D=1500 mm)	32	456.9	32	456.9	100%	-	-	0%	-	-	0%	
3	BOX - Culvert	12	191.9	11	174.9	91%	-	-	0%	1	17.0	9%	km10+669
4	RC Retaining Wall	63	2,580.0	58	2,445.0	95%	-	-	0%	5	135.0	5%	
	*Additional	17	434.6	17	434.6	100%	-	-	0%	-	-	0%	
	*Changed	2	86.5	2	86.5	100%	-	-	0%	-	-	0%	
	SUM	82	3,101.1	77	2,966.1	96%	-	-	0%	5	135	4%	
5	Legoblock Wall	26	2,670	26	2,670	100%	-	-	0%	-	-	0%	
	*Additional	5	265	5	265	100%	-	-	0%	-	-	0%	
	* Changed	20	1,394	20	1,394	100%	-	-	0%	-	-	0%	
	SUM	51	4,329	51	4,329	100%	-	-	0%	-	-	0%	
6	Gabion	72	3,170	53	2,683	85%	-	-	0%	19	487	15%	
7	Bridge	8	162	8	155	96%	-	-	0%	-	7	4%	BR.2a.changed

8	Granular Base		24,620		11,920	48%		-	0%		12,700	52%	
9	Binder Course		24,620		10,160	41%		-	0%		14,460	59%	
10	Drainage Channel		13,593		2,907	21%		-	0%		10,686	79%	
11	Terramesh	12	608	1	25	4%	-		0%	11	583	96%	Changed from RC Wall
12	Green Terramesh	7	711	-	-	0%	-	-	0%	7	711	100%	

Progress of Work, LOT 2 (Akkord ICIC)

As of End of December 2020

Description of Works	UNIT	BOQ Quantity	PERFORMED UP TO DATE	Comparison %
DESIGN WORKS Shop drawings km	km	25.62	80%	80%
Earthworks				
Embankment works	km	25.62	5.12	20%
Pavement				
Capping layer h=200mm	km	25.62	4.80	19%
Base course h=200mm	km	25.62	2.48	10%
Asphalt Binder course h=100mm	km	25.62	0.88	3%
Asphalt Surface course h=40mm	km	25.62		0%
Drainage works				
Pipe Culvert d=1.0 m(New)	m	871.00	169.00	19%
Pipe Culvert d=1.5 m(New)	m	402.0	137.00	34%
Box culverts d=3mx2m	m	84.0	38.00	45%
Box culverts d=2mx2m	m	37.0	12.00	32%
Retaining Structures				
RC Wall	m	3,758	885	24%
Lego Block	m	614		0%
Gabion Wall	m	2,505	20	1%
Gr Teramesh	m	183		0%
Teramesh	m	393		0%
Soil Nailing	m	3,080		0%
Bridge works				
Bridge № 8	sum	100.0%	0%	0%
Bridge № 9	sum	100.0%	0%	0%
Bridge № 10	sum	100.0%	0%	0%
Bridge № 11	sum	100.0%	0%	0%
Bridge № 11a	sum	100.0%	0%	0%
Bridge № 11b	sum	100.0%	0%	0%
Bridge № 11b.1	sum	100.0%	0%	0%
Bridge № 11c	sum	100.0%	0%	0%
Bridge № 12	sum	100.0%	10%	10%
Bridge № 13	sum	100.0%	15%	15%
Bridge № 14	sum	100.0%	15%	15%
Bridge № 15	sum	100.0%	74%	74%
Bridge № 16	sum	100.0%	0%	0%

27. Construction activities have been monitored by CCs HSE officers on daily basis Some photos from construction sites are provided in **Annex 1**.

2.4 Description of Any Changes to Project Design and Work scope Variation Orders, LOT1

No	Subject	Issued Date	Amount (GEL)	Cumulative (Gel)
1	Demolition of Existing Bridge at Km 0+200	7 th Mar. 2019	565,256.31	565,256.31
2	Relocation of Gas Pipeline	2 nd Sep. 2019	1,270,415	1,835,671.31
3	Relocation of Power Transmission Line	25 th Sep. 2019	1,178,859.91	3,014,530.31
4	Relocation of Water Pipelines	7 th Apr. 2020	1,304,118.59	4,318,648.80
5	Provide and install Cast Iron Grates	4 th May 2020	3,489,323.10	7,807,972.00
6	Provide and install Cast in situ Concrete drainage channel	18 th Sep. 2020	701,702.64	8,509,674.64

Variation orders, LOT 2

28. Changes to project design have not been done for this reporting period.

2.5 Description of Any Changes to Agreed Construction methods

29. During the reporting time period, the Contractor did not make any major changes in the construction method and design which may influence environmental effects to the project area.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

30. The Supervision Consultant will supervise and monitor the project construction process. The SC includes Environment Specialist (International & National) as part of their team to oversee the overall implementation of environmental management plan (EMP & SEMP), environmental monitoring, and compliance to the environmental requirements of ADB. SC Environmental Specialists prepare quarterly environmental monitoring reports required by ADB, monitor the environmental compliance of the Construction Contractor.

31. SEMP for LOT 2 was approved on 08.06.2020. Last parametric measurements of air, noise and water quality were carried out on 04.07.2020 for LOT1 BSG. For LOT2 AKKORD have not been carried out because of lock downs and restrictions associated with COVID 19 pandemic. Three HSE monitoring inspections have been carried out during the reporting period, relevant Non- Compliance Notes have been sent to Contractor. An appropriate corrective action plan (CAP) has been submitted for LOT1 (BSG) and partly implemented. For LOT 2 preparation of the Correction Action Plan has started and will be completed in two weeks, the reason to why such document was not prepared earlier is restrictions and lock down associated with COVID 19 pandemic as AKKORD's HSE representative stated.
32. The vibration study was carried out on 25 - 27.06.2020 by SC, based on the concern of the owner of the commercial space as a result of the vibration caused by the heavy machinery moving on the road (relevant report was submitted as a separate document to RD). It can be concluded that the data, which were acquired during these 3 day surveys show cases that the vibration on road, which is caused by heavy machinery movement, is considerably lower than permitted level and does not cause damages to the building. Abovementioned study has been carried out based of local resident's (hotel owner) complaint. Based on aforementioned Issue has been closed (28.06.2020).

3.2 Site Monitoring/Audits

33. Even though COVID-19 pandemic situation, since Contractors have been executing works, Site HSE inspections have been undertaken during reporting period by Contractors Environmental Manager and Construction Consultant's Staff (relevant Non-compliance reports prepared and filed, see Annex 2). The summary of site inspections is provided in **Table 3** below.

**Table 3: Summary of Site Inspections/Audits
(Lot1/Lot2)**

Date of visit	Name of Company	Auditors name	Purpose of audit	Summary of any significant findings	Cross reference to Audit report
08.09.2020	BSG	Shalva Bosikashvili	Compliance with HSE requirements, SEMP	<ul style="list-style-type: none"> - Deep cuts without hard barriers and warning signs - Concrete debris/big rocks, spoil, vegetation remains alongside the road - Safety standards violation (Unsafe wiring, workers without helmets, rebar without capping, heavy equipment Operation without flagman, lack of safety warning signs) 17 - Damaged trees (KM 	Relevant Non-compliance notes submitted

				<p>17)</p> <ul style="list-style-type: none"> - Unacceptable housekeeping and multiple oil spills, oil drums kept outdoor 	
17.09.2020	Akkord	Shalva Bosikashvili	Compliance with HSE requirements, SEMP	<ul style="list-style-type: none"> - Clean existing Oil spills and prevent spillages in future. - Spill/Contamination prevention and Vehicle/Heavy equipment inspection trainings should be carried out for the contractor's staff ASAP. - Special training should be provided to the staff regarding Housekeeping at the construction sites and include this issue in daily Toolbox talks. - Drip trays should be provided and used at the vehicle and heavy equipment maintenance area/ Re- fuelling points - Spill Response Equipment should be placed on site; Spill kits should be placed at the vehicle and heavy equipment maintenance area, fuel and lubricant storage and refueling points - All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding, prohibit usage of the damaged Vehicles/Heavy equipment. - Observe H&S standards and requirements- Use relevant hard barriers alongside the deep cuts, trenches and pits, provide workers with PPE (including winter equipment) and ensure 	

				<p>PPE usage at the construction sites</p> <ul style="list-style-type: none"> - Establish relevant administrative measures to ensure H&S proper performance - Provide sufficient number of standard warning signs at the facilities and construction sites - Remove spoil and concrete debris from the road shoulders <p>Keep oil/fuel drums under shelter on the impermeable surface</p>	
09.11.2020	Akkord	Shalva Bosikashvili	Compliance with HSE requirements, SEMP	<ul style="list-style-type: none"> - Landslide at KM49+070; appropriate geotechnical measures should be implemented - Special training should be provided to the staff regarding Housekeeping at the construction sites and include this issue in daily Toolbox talks. - Observe H&S standards and requirements- Use relevant hard barriers alongside the deep cuts, trenches and pits, provide workers with PPE (including winter equipment) and ensure PPE usage at the construction sites - Establish relevant administrative measures to ensure H&S proper performance - Provide sufficient number of standard warning signs at the facilities and construction sites - Remove spoil and other waste from the road edges. 	

34. Non-compliance correction action report have not been submitted yet. Because of frequent work activities suspension, associated with COVID 19 pandemic and governmental restrictions, CC was not able to carry out/complete relevant corrective

actions. Both Lots continued construction works since March, thus possible deadline for correction action report is the end of March.

3.3 Issues Tracking (Based on Non-Conformance Notices)

35. During HSE site inspections some non-conformances were detected. 4 Non-Conformances detected for LOT1 BSG they were described in Non-Compliance Notes (see Annex 2) relevant correction action plan has not been prepared so far. Environmental Issues Tracking Register is provided in **Table 4** below for the Jul-Dec 2020 reporting period.

Table 1. Environmental Issues Tracking Register Book

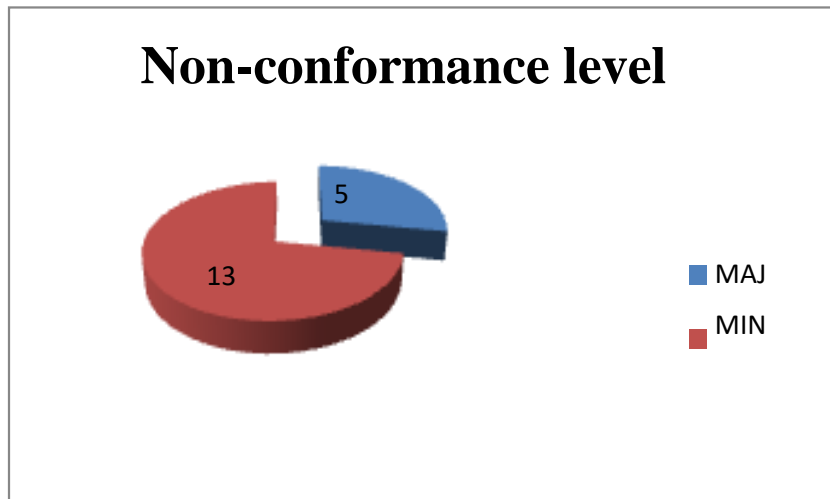
No.	Site / Location	Date Recorded	Category	Description of Issue /IEE Requirements	Issues No.	Issue Level	Due Date	Priority	Person Responsible	Status	Date Closed	Comments
1	Chumateleti-Kharagauli secondary road rehabilitation(Lot1)	08.09.2020	Environment & HS	Compliance with HSE requirements, SEMP HSE Inspection Findings	6	Major	28.09.2020	High	Contractor LOT1(BS G)	Partially closed		Issue is still not closed, because HS Managers were replaced and new HS Managers have just started relevant process to solve this issue.
2	Chumateleti-Kharagauli secondary road rehabilitation(Lot2)	17.09.2020	Environment & HS	Compliance with HSE requirements, SEMP HSE Inspection Findings	11	Major	27.09.2020	High	Contractor LOT2 (AKKORD)	Partially closed		Issue is still not closed, because HS Managers were replaced and new HS Managers have just started relevant process to solve this issue.

No.	Site / Location	Date Recorded	Category	Description of Issue /IEE Requirements	Issues No.	Issue Level	Due Date	Priority	Person Responsible	Status	Date Closed	Comments
3	Chumatele ti-Kharagauli secondary road rehabilitation(Lot2)	09.11.2020	Environment & HS	Compliance with HSE requirements, SEMP HSE Inspection Findings	6	Major	29.11.2020	High	Contractor LOT2 (AKKORD)	Partially closed		Issue is still not closed, because HS Managers were replaced and new HS Managers have just started relevant process to solve this issue.

Table 4. Summary of Issues Tracking Activity for Current Period

Summary Table	
Total Number of Issues for Project	54
Number of Open Issues	18
Number of Closed Issues	36
Percentage Closed	66.6
Issues Opened This Reporting Period	18
Issues Closed This Reporting Period	0

Figure 2. Summary of Issues by Non-Conformance



3.4 Trends

37. Contractor’s HSE performance generally satisfactory, relevant trainings are provided to the site staff, required documents and reports submitted, waste segregation and disposal procedure acceptable. Grievance redress system is established, the grievance boxes are located at the entrance of the Company Office in Kharagauli and entrance of the Camps (Kharagauli and Sagandzile).Lot 1.

38. For LOT 2 Akkord H&S performance improved, but significant improvements are required for the environmental safeguards implementation on site and for paperwork. Since December of 2020 till March of 2021 non-performance on LOT 1 and poor performance on LOT 2 have been identified. only pipe replacement and other insignificant works were carried out, thus this issues will be resolved in the nearest future as the road construction works are continued.

39. To identify trends in environmental issues, information from previous Bi-Annual EMR is used. The summary of the issues is provided in the **table 5** below.

Table 5: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed rate
1 July 2018 – December 2018	2	100%	0%
2 January - June 2019	12	75%	25%
3. July 2019 – December 2019	12	67%	33%
4. January - June 2020	4	0%	0%
5. July-December 2020	54	66.6	0%

40. As explained above, the construction works were not carried out since December of 2020 and non-compliances will be resolved in the nearest future.

Note: First Bi-annual EMR has been submitted when actual construction activities were not commenced.

3.5 Unanticipated Environmental Impacts or Risks

41. So far unanticipated environmental impacts/risks are not identified.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

42. Environmental monitoring started immediately after the commencement of civil works.

43. According to the project EIA, periodic parametric measurements of air, noise and water quality for both lots should be carried out by the construction contractor according appropriate schedule. Locations of measurements are defined by the method statement for particular area.

44. During the reporting period the construction contractors (Lot 1 and Lot 2) conducted monitoring of the following sites:

- Camp and construction sites,
- Installation of batching plant and crusher (relevant documentation prepared and submitted)

- Tree felling

45. Last parametric measurements of air, noise and water quality have been carried out on 04.07.2020 (LOT1). For LOT2 measurements of air, noise and water quality have not been carried out due to lock downs and restrictions associated with COVID-19 pandemic. Results of noise and water measurements are given in **Annex 4**. The samples were taken 50 meters upstream and 50 meters downstream from the construction site to evaluate the water quality difference before and after the construction activities. The results as indicated show that there is no difference in the river water quality at 50 meters upstream and downstream from the construction activities. The water test results for Chemical and Microbiological parameters were compared with IFC and Georgian Acceptable Limits (resolution of the Georgian government #58 on the "Approval of technical regulations of potable water) revealed that all the test parameters are within the range of acceptable limits.

Air quality and noise levels tested at various locations along the project area and test results revealed that the air quality is good, dust levels, gaseous pollutant levels and noise levels are within the national standards of Georgia

46. Noise and air pollution standards defined by IFC/WHO 1999 are presented in the Table 6 and 7 below.

Table 6: Noise Level Guidelines

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

47. Air pollution standards by IFC/WHO 1999 are presented in the Table 7 below.

Table 7: 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

4.2 Trend

48. Contractor's HSE performance generally satisfactory, relevant trainings are provided to the site staff, required documents and reports submitted, waste segregation and disposal procedure established. Noise and vibration levels are permanently controlled at the sensitive locations.

49. So far all mitigation measures identified within the project are effective.

4.3 Summary of Monitoring Outcomes

50. Last parametric measurements have been carried out on 04.07.2020. Next parametric measurements will be performed on quarterly basis according to ADB guidelines. Monthly HSE inspections have been carried out to monitor HSE culture and performance at the construction sites. Frequently identified issues are: Unacceptable housekeeping, heavy equipment operation without banksman, outdoor power generators working without drip trays and sufficient fire extinguishers, huge spoil/waste stockpiles, HSE standards violation, trees damage.

51. SC and RD will monitor the improvements under the project and reflect findings in the next Bi- annual EMR as of January – June 2021 reporting period.

4.4 Material Resources Utilization

52. BSG obtained licenses for gravel and sand extraction (N10000836;N1000948;N1000491. N 10000686). Below table reflects production of inert material. The quarry processing projects within these licenses have been prepared.

Table 9: Production of Inert Material

#	Description	Unit	Previous Quantity in Stock	Current Production	Current Consumption	Current Quantity in Stock
			წინარაოდენობა საწყობში (A)	მიმდინარე რეზერვუაჟი (B)	მიმდინარე ეგზარავაჟია (C)	მიმდინარე რეზერვუაჟი ნობა საწყობში (D)=(A)+(B)-(C)
	Sand 0-5	m ³	500	800	800	500
	Gravel5-10	m ³	2500	1500	1500	2500
	Gravel10-16	m ³	-		-	-
	Gravel10-18	m ³	2700	2200	1500	3400
	Gravel10-20	m ³		150	-	150
	Gravel16-32	m ³	-	-	-	-
	Sand-Gravel for Sub base	m ³	-	-	-	-
	Base 0-40	m ³	3500	4000	-	7500
	Gravel20-40	m ³	750	3000	500	3250
	Gravel0-120	m ³	1500	500	200	1800
	Gabion&Terramesh Material 100-200	m ³	500	500	300	700

Rocks300-800mm	m ³	500	1000	-	1500
Rocks500-1000mm	m ³	-	-	-	-
Sand-Gravel Mix for shoulders	m ³	-	-	-	-
Lego Blocks	Unit	2 500	300	991	1809
R/C foundation blocks for Terramesh and green terramesh	Unit	230	-	230	-
Pre- CastRCPipeD=1000	m	800	-	-	800
Pre- CastRCPipeD=1500	m	250	-	-	250
Gabion Box 2x1x1	Unit	2500	-	1700	800
GabionBox1,5x1x1	Unit	-	-	-	-
TerrameshBox4x2x1	Unit	50	-	-	50
Green Terramesh 4x3x0,76	Unit	-	-	-	-

Table 10. Production / Purchase and Delivery of Pre Fabrics and Plants

No.	Description	Unit	Quantity	Country / Place of Origin	Status	Delivery Time
1	Cement	ton	25			
2	Reinforcement	ton	20			

4.4.1 Current Period

53. Permits for water use and water discharge obtained for the camp sites (LOT1 and LOT2). For current reporting time period water, gas and electricity consumption is given below:

Table 11

LOT1

Water	M ³	3044
Gas	M ³	5937
Electricity	KWT/Hour	482194

LOT2

Water	M ³	211
Gas	M ³	1549
Electricity	KWT/Hour	43635

4.5 Waste Management

54. Waste segregation and disposal procedure established. Appropriate waste containers for hazardous and domestic waste are placed and labeled (see Annex 1). The warehouse of hazardous waste is arranged on Kharagauli camp site for Lot 1. Training of the personal was conducted. The agreement was signed with the local cleaning service and domestic waste is removed twice a week, also for hazardous waste disposal agreement has been concluded with relevant licensed company, "Ecomedi". For LOT2 non-hazardous waste disposed by Khashuri municipal cleaning service, for the hazardous waste disposal contractor company is not selected yet. Warehouse for the hazardous waste (LOT 2) is not arranged so far.

4.5.1 Current Period

55. Insignificant amount of hazardous waste kept in warehouse at Kharagauli camp (special rooms with concrete floor and locked metal gate with warning). "Ecomedy" (licensed company) removed and disposed hazardous waste from the construction sites.. Domestic waste from the sites removed and disposed by the licensed contractor (Kharagauli Cleaning Service). During the reporting period spoil removal/disposal works were not carried out. Spoil dumping area agreed with local municipality (same area used by Chinese company constructing the railway). Small volume of the hazardous waste is kept under the shelter in the containers and finally will be deposed by the licensed contractor LOT2.Non-hazardouswastedisposedbytheKhashuriMunicipalcleaningservice.Domesticwaste-

56. 19 MT and hazardous waste 10kg (kept in hazardous waste warehouse) generated during the reporting period for LOT 1. CC LOT 2 has not provided any information regarding waste disposal.

4.6 Health and Safety

4.6.1 Community Health and Safety

57. BSG assigned H&S officer (Nick Jashiashvili) to oversee H&S performance at the construction sites and camps. During this reporting period no accidents have been identified and recorded in the H&S log book, some near misses were identified and recorded in the Non-compliance Notes and HSE Inspection reports (see relevant Annexes).

4.6.2 Worker Safety and Health

58. During this reporting period no accidents have been recorded. Log books for HSE accidents prepared and kept at the camp site. HSE inspection carried out and identified some H&S non-compliances, particularly, heavy equipment working without banksman, PPE issues, rebar without capping, deep excavations and cuts without hard barriers, no flash lights at the hazardous places for nighttime warning.

59. Oleg Tabatadze was assigned as H&S officer for LOT 2 to oversee H&S performance at the construction sites and camp. During this reporting period no accidents/near misses have been identified and recorded in the H&S log book. Some near misses were identified and recorded in the Non-compliance Notes and HSE Inspection reports (see **Annexes 3**).

60. All H&S procedures associated with COVID-19 pandemic and recommended by WHO and Georgian government are addressed and followed. H&S plan has been updated accordingly ADB request. Special COVID 19 Emergency Response plan has been elaborated.

4.7 Training

61. HSE induction training was provided to the contractor's relevant staff. Daily tool boxes were carried out. Relevant training given to the personnel involved in the hazardous waste handling. Specific training regarding flora and fauna protection have been provided to the site staff. (Please see **Annex 3**).

4.8 Grievance Redress Mechanism

62. 62 complaints were submitted and recorded in the log book during the reporting period for both lots. Status of complaints is given in table- Annex 3.

63. 10 complains are regarding Infrastructure/asset damage, 5 complains are regarding crop compensation, 3 complains are regarding restriction/loss of access, 15 complains are regarding HSE concerns and other issues. 6 complain accepted, other complains are under review.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review

64. SEMP for LOT 1 has been submitted in October 2018, reviewed by Consultant Engineer, RD, ADB and with appropriate comments sent back, for the revision. During preparation of SEMP existing EMP was used as a baseline document by CC.

65. SEMP for LOT 1 was prepared by the Contractor BSG, endorsed by SC and approved by RD and reviewed/commented by the RETA International Environmental Consultant of ADB under RETA9541

- Ms. Keti Dgebuadze. SEMP for LOT 2 was approved on 19.06.2020

66. At this stage, presented mitigation measures are effective and there is no need for corrections or alternatives. So, no changes needed in the mitigation measures of the Environmental Management Plan at the moment. SEMP for both Lots have been updated according to ADB's requirements and include anti-COVID –19Measures.

6. GOOD PRACTICE AND OPPORTUNITY FORIMPROVEMENT

6.1 Good Practice

67. During the reporting period, the Contractors BSG (LOT1) and AKKORD ICIC (LOT2) timely provided the following:

BSG:

- Prepare and submit Scoping Reports for the Crusher and Batching Plant. Developed the Specific Environmental Management Plan and submitted it to the engineer;
- Timely deliver Monitoring Reports, and other documents
- Timely deliver the Health Safety Management Plan to the Engineer;
- Conclud the Agreement on removing of domestic waste;
- Conclude the agreement with licensed company "Ecomedi" for hazardous wastedisposal
- Provide Bio Toilets for the Construction Sites
- Provide safety equipment for the working personnel;
- Obtained technical regulations on water withdrawal permit from the Ministry of Environment Protection and Agriculture.
- Establish grievance redress system

AKKORD ICIC:

- Timely Submitted SEMP for LOT2
- H&S experienced officer Oleg Tabatadze has been assigned.

6.2 Opportunities for Improvement

68. Provide relevant site staff with housekeeping and pollution prevention trainings, also provide field staff with H&S trainings - Heavy Equipment Operation, PPE, Tripping & Slipping Hazards, Deep Excavation Safety, Fire Safety etc.

7. SUMMARY ANDRECOMMENDATIONS

7.1 Summary

69. It should be highlighted that during the reporting time period the HSE performance of the Contractor was satisfactory. The actions of the Contractor didn't have any negative effect on biodiversity and no poaching actions were evident. No safety accident or near misses were identified. 7 grievances received from the local habitants and recorded in relevant logbook.

70. During the reported period construction activities were implemented on Lot 1 & Lot 2. Contractor (BSG) have intensified all activities to improve the progress of the works on sites. Individual and Joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of Supervisor Consultant and RD on a regular basis.

71. Day-to-day monitoring of the construction sites were carried out by the Environmental Specialists of Contractor, relevant monitoring reports were developed and sent to Supervision Consultant.

72. Environmental Monitoring Specialist of Pyunghwa Engineering Consultants Ltd, Yooshin Engineering Corporation and Roads Rehabilitation and Modernization Supervision Direction Ltd, Mr. Shalva Bosikashvili conducted monthly monitoring of project sites. He also developed Semi-Annual environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to RD.

73. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements for Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road project.

74. Environmental Specialist of RD, Ms. Luiza Bubashvili performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMP, and other environmental commitments of the contractor.

75. Mitigation measures in order to reduce major environmental impacts have been instructed to CCs during the monitoring visits as well.

76. In accordance with the EIA, and the accompanying Environmental Monitoring Plan (EMP), the Contractor is required to undertake parametric measurements and observations on air quality, surface water

quality, noise and socio-cultural resources.

77. Necessary instructions have been given to the Contractors by RD and SC to follow the ADB requirements for the LOT1 and LOT2.

78. The issues identified during this monitoring period is summarized in Table 12.

Table 12. Issues Identified During the Monitoring Period (Jul – Dec 2020)

Issue	Required Action	Responsibility	Timing (Target Dates)
Deep cuts without hard barriers and warning signs	Provide hard barriers and warning signs	BSG HS Manager	31.03.2021
Unacceptable housekeeping and multiple oil spills, oil drums kept outdoor	Clean site, reinstate contaminated soil. Keep fuel and lubricants in the building or under shelter	BSG HS Manager	31.03.2021
Safety standards violation(Unsafe wiring, workers without helmets,	Provide field staff with relevant HS trainings	BSG HS Manager	31.03.2021
Concrete debris/big rocks, spoil, vegetation remains alongside the road	Remove waste from the road shoulders and dispose as required	BSG HS Manager	31.03.2021
Oil spills	Clean existing Oil spills and prevent spillages in future	Akkord HS Manager	31.03.2021
PPE	Provide workers with PPE (including winter equipment) and ensure PPE usage at the construction sites	Akkord HS Manager	31.03.2021
Concrete debris/big rocks, spoil, vegetation remains alongside the road	Remove waste from the road shoulders and dispose as required	Akkord HS Manager	31.03.2021

7.2 Recommendations

79. The following activities are planned for the next January – June 2021 reporting period:

- Quarterly parametric measurements of the air/water quality and noise/vibration should be scheduled and performed in time;
- Undertake trainings for housekeeping improvement and pollution prevention;
- Undertake H&S Trainings: Heavy equipment working procedure, PPE issues, rebar capping, deep excavations and cuts hazard prevention, nighttime warning signs.
- Update SEMP's on anti-COVID measures.

ANNEXES:

Annex 1: Site Photos



13,10,2020 KM16+830



07,10,2020 KM13+500



29,10,2020 KM20+250



28.10.2020km10+600



Annex 2 – Non-Compliance Notices

Non-Compliance Notice

Project: Construction Supervision of Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 1	<p style="text-align: center;">Non-compliance Notice</p> <p>Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 1 (Contractor-BSG)</p>
Contract No: SRIP/CS/QCBS-01	
Contractor: BSG	
Reference: LOT 1 construction sites	
<p>This notice is to advise the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented urgently.</p>	
<p><u>GENERAL COMMENT FOR ALL SITES:</u></p>	
<p>All construction materials and wastes should be properly segregated and stored adequately, Oil spills should be prevented, Oil spill response kits and drip trays should be placed at the appropriate locations, Housekeeping must be improved, H&S culture should be established and maintained.</p>	
<p><u>NON-COMPLIANCE at the Lot 1 construction sites</u></p>	
<ul style="list-style-type: none"> - Deep cuts without hard barriers and warning signs - Concrete debris/big rocks, spoil, vegetation remains alongside the road - Safety standards violation (Unsafe wiring, workers without helmets, rebar without capping, heavy equipment Operation without flagman, lack of safety warning signs) - Damaged trees (KM 17) - Unacceptable housekeeping and multiple oil spills, oil drums kept outdoor 	



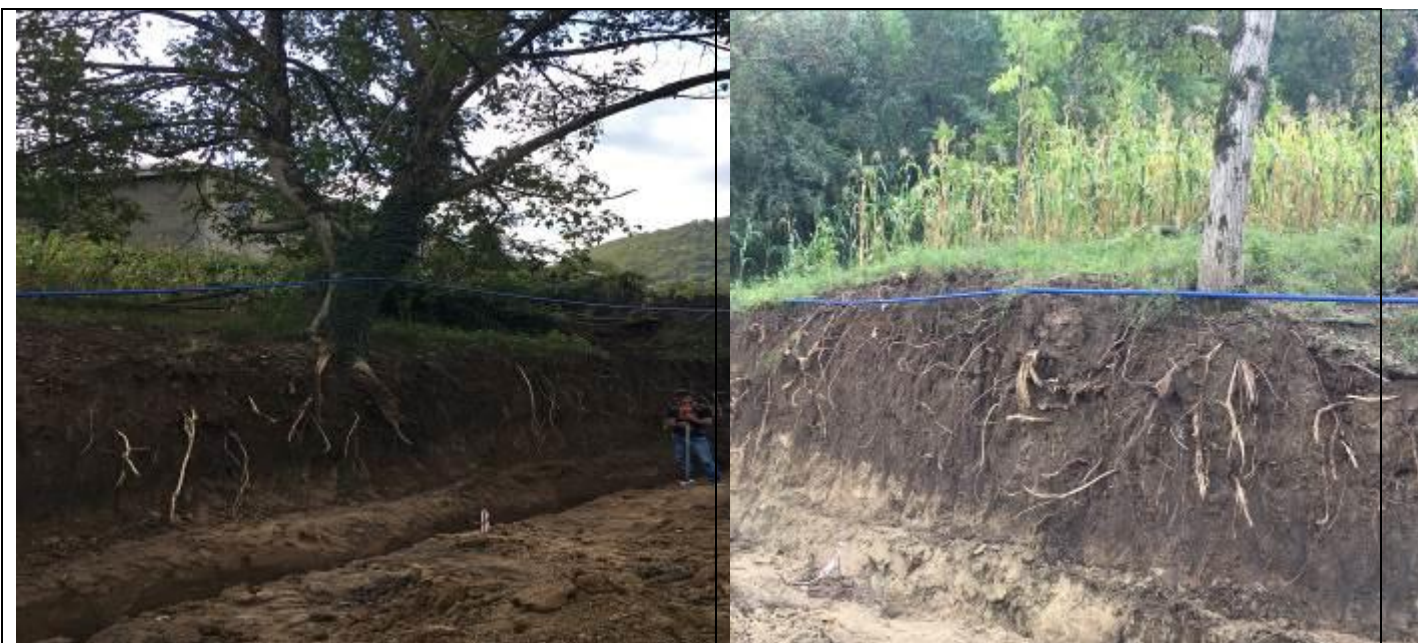
KM 13-14; KM 20 Deep cuts without hard barriers and warning signs



Concrete debris/big rocks, spoil, vegetation remains mixed dumped alongside the road
KM13;KM17



Safety standards violation (Workers without PPE, heavy equipment Operation without flagman, lack of safety warning signs, hard barriers etc)



Damaged trees (KM 17)





Unacceptable housekeeping and multiple oil spills, oil drums kept outdoor (Sagandzile Crusher area, Kharagauli camp)

All these conditions have to be remedied within 20 days by the prime Contractor (BSG).

<p>Date of site visit: 08.09.2020</p>	
<p>Shalva Bosikashvili - Environmental specialist - Roads Rehabilitation and Modernization Supervision Direction Ltd,</p>	
<p>Luiza Bubashvili - Environmental Safeguard Consultant under ADB & EIB financed Projects (RD)</p>	

Non-Compliance Notice

Project: Construction Supervision of Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 2	Non-compliance Notice
Contract No: SRIP/CS/QCBS-01	Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 2 (Contractor-Akkord ICIC)
Contractor: Akkord ICIC	
Reference: LOT 2 construction sites	
<p>This notice is to advise the prime Contractor, on the referenced Contract, of the following notice on health, safety and environmental measures to be implemented urgently.</p>	
<p><u>GENERAL COMMENT FOR ALL SITES:</u> Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spills should be prevented, Oil spill response kits should be placed at the appropriate locations, Housekeeping must be improved, H&S culture should be established and maintained.</p>	
<p><u>NON-COMPLIANCE at the Lot 2 construction sites</u></p> <ul style="list-style-type: none"> - Clean existing Oil spills and prevent spillages in future - Spill/Contamination prevention and Vehicle/Heavy equipment inspection trainings should be carried out for the contractor's staff ASAP - Special training should be provided to the staff regarding Housekeeping at the construction sites and include this issue in daily Toolbox talks. - Drip treys should be provided and used at the vehicle and heavy equipment maintenance area/ Re-fuelling points - Spill Response Equipment should be placed on site; Spill kits should be placed at the vehicle and heavy equipment maintenance area, fuel and lubricant storage and refueling points - All vehicles and heavy equipment should be inspected on daily basis (use relevant checklists), in case of leakage finding, prohibit usage of the damaged Vehicles/Heavy equipment. - Observe H&S standards and requirements- Use relevant hard barriers alongside the deep cuts, trenches and pits, provide workers with PPE (including winter equipment) and ensure PPE usage at the construction sites - Establish relevant administrative measures to ensure H&S proper performance - Provide sufficient number of standard warning signs at the facilities and construction sites - Remove spoil and concrete debris from the road edges - Keep oil/fuel drums under shelter on the impermeable surface 	



Multiple oil spills and unacceptable housekeeping at the Chumateleti camp



Spilled concrete and mixed (stones, concrete, spoil) stockpiles KM 44+500; 43+980



Spoil disposal area and concrete debris KM 48+600; 48+046; 47+800. No hard barriers, no warning signs, improper housekeeping



Heavy equipment operation without flagman KM 46+950



Deep pit without hard barrier, unacceptable housekeeping , power generator without drip tray, workers without PPE KM 42+275

All these conditions have to be remedied within 20 days by the prime Contractor (Akkord ICIC).

Date of site visit: 17.09.2020

Shalva Bosikashvili - Environmental specialist -
Roads Rehabilitation and Modernization
Supervision Direction Ltd,

Luiza Bubashvili - Environmental Safeguard
Consultant
under ADB & EIB financed Projects (RD)

Non-Compliance Notice

<p>Project: Construction Supervision of Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 2</p>	<p style="text-align: center;">Non-compliance Notice</p> <p>Rehabilitation of Dzirula – Kharagauli –Moliti – Pona – Chumateleti Secondary Road Section (50 Km) –Lot 2 (Contractor-Akkord ICIC)</p>
<p>Contract No: SRIP/CS/QCBS-01</p>	
<p>Contractor: Akkord ICIC</p>	
<p>Reference: LOT 2 construction sites</p>	

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

GENERAL COMMENT FOR ALL SITES:

Site internally should be arranged properly and cleaned regularly. All construction materials and wastes should be properly segregated and stored adequately, Oil spills should be prevented, Oil spill response kits should be placed at the appropriate locations, Housekeeping must be improved, H&S culture should be established and maintained.

NON-COMPLIANCE at the Lot 2 construction sites

- Landslide at KM49+070; appropriate geotechnical measures should be implemented
- Special training should be provided to the staff regarding Housekeeping at the construction sites and include this issue in daily Toolbox talks.
- Observe H&S standards and requirements- Use relevant hard barriers alongside the deep cuts, trenches and pits, provide workers with PPE (including winter equipment) and ensure PPE usage at the construction sites
- Establish relevant administrative measures to ensure H&S proper performance
- Provide sufficient number of standard warning signs at the facilities and construction sites
- Remove spoil and other waste from the road edges

All these conditions have to be remedied within 20 days by the prime Contractor (Akkord ICIC).

Date of site visit:09.11.2020

Shalva Bosikashvili - Environmental specialist -
Roads Rehabilitation and Modernization Supervision
Direction Ltd

Luiza Bubashvili - Environmental Safeguard
Consultant
under ADB & EIB financed Projects (RD)



Landslide 49+070



Heavy equipment operation without flagman KM 43+915; 47+700



**Spoil, timber, metal and concrete debris KM 44+800; 44+000; 44+200, 44+160; 42+480, 42+200.
No hard barriers, no warning signs, improper housekeeping.**

Annex 3 – Complaints

Recipient	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution
PYUNGHWA	06.07.20	Abramishvili Qetevani ID 56001005986 Tel: 555254521	Damage to Infrastructure / Assets	The foundation of summer café at km 12+075 was damaged during soil excavation.	On 07.07.2020 The situation was inspected in situ. Contractor was requested to restore foundation. On 18.07.2020 the foundation of the building is restored.	Accepted
RD	07.07.20	Kruashvili Tarieli ID 56001004992 Tel: 599292493	Crop Compensation	He request additional buy out of plants.	On 15.07.2020 The issue stated in the letter was studied in situ. The corresponding Minutes was prepared. On 24.07.2020 the letter concerning buy out of plants was sent to the Employer.	Under review
RD	07.07.20	Kereselidze Gulo ID 56001017836 Tel: 595696473	Restriction or loss of access	She requests to arrange retaining wall on the yard entrance.	On 12.07.2020 the issue of necessity of arranging yard entrance was studied in situ. On 27.07.2020 The Employer was informed about the issue, the Employer agreed to arrangement of wall	Accepted
RD	08.07.20	Tsitskishvili Zaza ID 56001012461 Tel:577646370	Damage to Infrastructure / Assets	His fence was damaged as a result of road construction.	On 15.07.2020 The issue stated in the letter was studied in situ. It was estimated that the fence was damaged by the Contractor.	Forwarded to CC

RD	10.07.20	Arjevanidze Leila ID:56001009405 T:593515098	HSE Concerns	Requests to arrange reinforced concrete retaining wall along his plot.	<p>On 10.07.2020 the situation was inspected in situ and corresponding Minutes was prepared.</p> <p>On 22.07.2020 the letter regarding the mentioned issue was sent to the Employer.</p> <p>On 18.07.2020 The section was inspected again, other residents of the village has also participated in the process.</p> <p>On 27.07.2020 the meeting with the representative of residents was held in the Engineer's office, corresponding Minutes was prepared.</p> <p>On 25.08.2020 The Employer was informed about the existing situation.</p> <p>On 01.10.2020 the commission with Employers' participation has studied the issue.</p> <p>On 18.11.2020 The approval of Employer concerning construction of retaining wall was received.</p>	Accepted
RD	15.07.20	Bantsadze Qetevani ID:01024045056 T:577213693	HSE Concerns	Requests to relocate existing spring to the yard side, to replace gabion wall with concrete retaining wall and to arrange fence.	<p>On 21.07.2020 the situation was studied in situ and corresponding Minutes was prepared.</p> <p>On 23.07.2020 The letter concerning the existing situation was sent to the Employer.</p> <p>On 22.01.2021 the letter with same requests was received.</p> <p>On 26.01.2021 meeting with Mrs. Ketevan was held in situ and corresponding Minutes was prepared. Employer was informed about the issue in writing.</p> <p>On 08.02.2021 meeting with Mrs. Ketevan Bantsadze was held in the Supervision office, where her requests were discussed.</p> <p>On 10.02.2021 the Employer was informed in written about the agreement reached during the meeting.</p>	Under review

RD	21.07.20	Kiknadze Leila ID:56001002063 Tel.: 557232516	Crop Compensation	Request additional buy out of plants and arrangement of access road to the plot.	On 21.07.2020 the issue was studied in situ. The access road is considered with the design and will be arranged by the Contractor. On 24.07.2020 letter concerning buy out of additional trees was sent to the Employer.	Under review
RD	21.07.20	Kiknadze Nia ID:01003016305 Tel.: 591050811	Damage to Infrastructure / Assets	Requests to repair steel fence, which in her words was damaged by the Contractor.	On 27.07.2020 the issue stated in the letter was studied in situ. The fact of damaging fence by the Contractor was not confirmed. On 25.08.2020 Employer rejected the request to repair the fence.	Rejected
RD	21.07.20	Kiknadze Nikoloz ID01001080080 Tel.:577295099	HSE Concerns	Requests to increase the height of retaining wall.	On 27.07.2020 the issue of reasonability of increasing the height of retaining wall was studied in situ. On 31.07.2020 letter concerning this issue was sent to the Employer. On 14.08.2020 The Employer agreed to implementation of works. On 20.08.2020 The Contractor finalized the works.	Accepted
RD	21.07.20	Kiknadze Tamaz ID05600102758 Tel.: 595363651	HSE Concerns	Requests to arrange retaining wall along the yard.	On 27.07.2020 the necessity of arranging retaining wall was studied in situ. On 31.07.2020 the letter concerning this issue was sent to the Employer. On 14.08.2020 The Employer agreed to arrangement of retaining wall. On 18.08.2020 The works are finalized.	Accepted
RD	21.07.20	Chankotadze Kakha ID01030028734 Tel.: 595598902	HSE Concerns	Requests to increase the height of retaining wall and arrange entrance to cattle -shed.	On 27.07.2020 the issue of necessity of increasing the height of retaining wall was studied in situ. On 31.07.2020 letter concerning this issue was sent to the Employer. On 14.08.2020 The Employer agreed to implementation of works.	Accepted

RD	21.07.20	Grzelidze Goderdi ID:56001005022 Tel.:558439195	HSE Concerns	Requests to arrange retaining wall, fence and yard entrance.	On 27.07.2020 the issues stated in the letter were studied in situ. On 29.07.2020 letter in this regard was sent to the Employer. On 09.09.2020 Employer sent letter and approved arrangement of fence and yard entrance.	Partially Acpt/Rjct
PYUNGHWA	23.07.20	Gegeshidze Teimurazi ID:35001099217 Tel.:	HSE Concerns	Requests to arrange r/concrete retaining wall along his plot.	On 27.07.2020 the necessity of arranging requested retaining wall was studied in situ. The same day letter regarding this issue was sent to the Employer. On 25.08.2020 the second letter concerning retaining wall was sent to the Employer. On 01.10.2020 the commission with participation of Employers' representatives studied the existing situation in situ. On 18.11.2020 written approval concerning construction of retaining wall was received.	Accepted
RD	05.08.20	Ebanoidze Daviti ID:01030031705 Tel.: 593103791	Crop Compensation	Requests compensation for plants and buildings.	On 05.08.2020 the issue raised in the letter was studied in situ. On 11.08.2020 the cracks on the walls of residential house were marked. On 21.08.2020 the letter was sent to the Employer. 10.11.2020 the cracks marked on the house were inspected.	Under review
RD	07.08.20	Chankotadze Besiki ID:56001004574 Tel.: 593491373	Crop Compensation	Requests compensation for plants and arrangement of yard entrance.	On 11.08.2020 facts stated in the letter were studied in situ. Corresponding Minutes was prepared. On 03.09.2020 the issue stated in the letter was rechecked	Under review
RD	14.08.20	Shergelashvili Xatuna ID:01010007276 Tel.:	HSE Concerns	Requests to arrange retaining wall along the yard.	On 18.08.2020 the issue stated in the letter was studied in situ and corresponding Minutes was prepared. The same day letter concerning this issue was sent to Employer. On 26.08.2020 Construction works are finalized.	Accepted

RD	14.08.20	Kruashvili Nikoloz ID:01024019637 Tel.: 593331814	HSE Concerns	Requests to arrange retaining wall along the yard.	On 18.08.2020 the issue concerning the necessity of arranging retaining wall was studied in situ. The same day letter concerning this issue was sent to Employer. The Employer approved construction of retaining wall On 26.08.2020 Construction works were finalized.	Accepted
RD	14.08.20	Eqseulidze Lia ID:18001027688 Tel.: 577319852	Restriction or loss of access	Requests to repair damaged yard entrance.	On 15.08.2020 the issue stated in the letter was studied in situ. It was estimated that yard entrance was damaged during the road construction.	Forwarded to CC
RD	14.08.20	Kiknadze Naziko ID:48001005709 Tel.:	HSE Concerns	Requests to arrange retaining wall on the omitted sections along the yard,to raise the height of constructed wall and to level the soil.	On 17.08.2020 facts stated in the letter were studied in situ. The agreement is reached concerning arrangement of retaining wall and levelling of the soil.	Partially Acpt/Rjct
Construction Contractor	14.08.20	Jambazishvili Gulnazi ID:56001010050 Tel.:	HSE Concerns	Requests to arrange retaining wall along the yard and compensation for ancillary building.	On 14.08.2020 the requests of Mrs. Gulnazi were studied in situ. The cracks on the walls are marked and monitoring will continue. Employer agreed to arrangement of retaining wall. On 26.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Partially Acpt/Rjct
Construction Contractor	25.08.20	Kiknadze Marina ID:56001005536 Tel.:	Other	Requests to arrange fence on concrete base.	On 26.08.2020 the request was studied in situ. The agreement was reached. The mentioned works are not currently implemented.	Accepted
RD	25.08.20	Kereselidze Gocha ID:56001003284 Tel.: 593469784	Restriction or loss of access	Requests to restore junction according to designed	On 27.08.2020 situation was studied in situ and corresponding Minutes was prepared. Contractor was requested to replace gabion and arrange asphalt pavement.	Partially Acpt/Rjct

				norms at km 5+000, which was damaged during the road construction. In particular, replacement of gabion and arrangement of asphalt pavement.		
RD	27.08.20	Bancadze Besiki ID:01004005779 Tel.: 558351656	Damage to Infrastructure / Assets	Requests to report current condition of house and further observation of the condition.	On 31.08.2020 the condition of the house was inspected, cracks were described and marked. On 10.11.2020 the condition of house was inspected again. On 26.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
RD	04.09.20	Arsenidze Neli ID:56001012052 Tel.: 557040469	Damage to Infrastructure / Assets	Declares, that movement of heavy vehicles has damaged the house.	On 10.09.2020 the cracks on the walls of the house were inspected, described and marked. On 21.10.2020 the condition of marked cracks was inspected. On 26.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
RD	07.09.20	Avalishvili Nora ID:56001018307 T:557170764	HSE Concerns	Requests extension of retaining wall from km 12+278 till her property.	On 15.09.2020 the situation was checked in situ. On 22.09.2020 The Employer was informed about the issue by letter	Rejected
RD	11.09.20	Osanadze Tea ID:56001011575 Tel.: 593116955	Damage to Infrastructure / Assets	Requests rehabilitation of retaining wall .	On 15.09.2020 the situation was checked in situ. Cracks on retaining wall and also on the walls of house were described and marked. On 27.10.2020 next inspection of cracks was implemented. On 18.11.2020 inspection was conducted,	Under review

					monitoring will continue.	
RD	21.09.20	Kiknadze Izolda ID:35001012860 Tel.: 577295099	HSE Concerns	Requests to increase the height of retaining wall and to construct fence.	On 21.09.2020 the reasonability of increasing the height of wall was checked in situ, The request was rejected.	Rejected
RD	21.09.20	Chelidze Ramazi ID:0013020187 Tel.:599254772	Other	Requests to arrange yard entrance, restore damaged drinking water pipe and confirm that retaining wall is in suitable condition.	On 28.09.2020 the facts described in the letter were checked in situ. On 01.10.2020 Employer was informed about the above mentioned by letter. The agreement is reached concerning arrangement of yard entrance and drinking water pipe.	Partially Acpt/Rjct
RD	21.09.20	Daushvili Irma ID:01025017281 Tel.:	Road Upgrading	States, that movement on rehabilitation section is impossible.	On 25.09.2020 the issue was inspected in situ. The Contractor is obliged to repair road pavement	Forwarded to CC
RD	28.09.20	Kiknadze Leila ID:56001002063 Tel.: 557232516	HSE Concerns	Requests to raise the height of retaining wall.	On 28.09.2020 the necessity of raising the height of retaining wall was inspected in situ. The corresponding letter was sent to Employer	Under review
PYUNGHWA	28.09.20	Orjonikidze Izolda ID:01027052862 Tel.: 593760931	Crop Compensation	Requests compensation for nut tree along the road.	On 28.09.2020 the issue was studied in situ.	Rejected
RD	29.09.20	Kiknadze Darejani ID:56001013707 Tel.: 595788550	HSE Concerns	Requests to extend the retaining wall.	On 30.09.2020 the reasonability of arranging the wall was studied in situ.	Accepted

RD	29.09.20	Osanadze Ramazi ID:56001014384 Tel.: 577671380	HSE Concerns	Requests to arrange r/concrete retaining wall along his plot, on the road side.	On 30.09.2020 the reasonability of arranging the wall was studied in situ. The Employer agrees to arrangement of the mentioned r/concrete wall.	Accepted
RD	29.09.20	Osanadze Teimurazi ID:56001011665 571647253	HSE Concerns	Requests to arrange r/concrete retaining wall along his plot, on the road side.	On 30.09.2020 the reasonability of arranging the wall was studied in situ. Due to the relief, arrangement of wall was rejected.	Rejected
RD	29.09.20	Inasaridze Daviti ID:56001001604 Tel.:	Damage to Infrastructure / Assets	At km 23+500 the design envisages arrangement of r/concrete pipe. Mr. Davit declares, that water coming from pipe will damage the yard of his hotel. Requests compensation.	On 30.09.2020 the issues stated in the letter were inspected in situ. On 20.10.2020 the letter was sent to the Employer concerning cancelation of pipe at km 23+500. The approval of Employer was obtained. The mentioned pipe will not be arranged. The water will be directed to next pipe by means of reinforced concrete channel.	Rejected
RD	01.10.20	Kurtanidze Dodo ID:56001000067 Tel.: 551153779	Inclusion in LARP	States, that road under construction occupies part of her yard. Requests compensation.	On 07.10.2020 the situation was studied in situ. The Employer is informed about this issue.	Under review
RD	01.10.20	Gurgenidze Vano ID:56001010262 Tel.:	Restriction or loss of access	Requests to restore damaged yard entrance.	On 23.10.2020 the Employer was informed about necessity of arranging yard entrance by letter.	Accepted

PYUNGHWA	05.10.20	Ulumbelashvili Tamazi ID:57001037577 Tel.: 599607435	Damage to Infrastructure / Assets	Requests to monitor cracks developed on the walls of his residential house.	On 06.10.2020 the condition of cracks on the walls of residential house were checked in situ. The cracks are marked, described and photo documented. Cracks will be observed periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
PYUNGHWA	05.10.20	Ulumbelashvili Shalva ID:57001003605 Tel.: 595345245	Other	States, that due to the movement of heavy load trucks, his already amortized house is being damaged, requests compensation.	On 06.10.2020 the mentioned issue was studied in situ and corresponding Minutes was prepared. The Employer is informed about this issue.	Under review
PYUNGHWA	05.10.20	Ulumbelashvili Omari ID:57001048793 Tel.: 595501088	Damage to Infrastructure / Assets	States, that during last period, cracks has developed on the wall of his residential house. Requests to monitor the cracks.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be observed periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
PYUNGHWA	05.10.20	Ulumbelashvili Kvtisavari ID:57001059852 Tel.:	Damage to Infrastructure / Assets	States, that due to the movement of heavy load trucks, cracks has developed on his residential house and ancillary building, requests to	On 06.10.2020 The residential house and ancillary building were inspected, The existing cracks are marked and photo documented, cracks will be monitored periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review

				monitor cracks.		
PYUNGHWA	05.10.20	Tabatadze Makvala ID:57001040640 Tel.: 599219381	Other	States, that road is located close to his residential house and it will be impossible to live there, requests compensation and also meeting with Employers' representative.	On 06.10.2020 visit was arranged, although the Complainant didn't allow to enter the yard. The Employer is informed about the mentioned issue.	Under review
PYUNGHWA	05.10.20	Suladze Giorgi ID:57001013734 Tel.: 558484225	Damage to Infrastructure / Assets	States, that cracks are observed on his residential house and ancillary building, requests monitoring.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be monitored periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
PYUNGHWA	05.10.20	Korkotadze Zurabi ID:57001015369 Tel.:	Inclusion in LARP	States, that the edge of the road is located close to his kitchen and bathroom, requests compensation.	On 06.10.2020 the situation was inspected in situ, The Employer is informed about the mentioned issue, waiting for Employers' decision. On 16.02.2021 letter from Employer was received with attached letter from Mr. Zurab Korkotadze. The requests of Mr. Korkotadze are the same as stated previously. On 19.02.2021 the Employer was informed in written about the opinion of Supervision Services.	Under review

PYUNGHWA	05.10.20	Korkotadze Givi ID:57001028947 Tel.: 599331597	Damage to Infrastructure / Assets	States, that due to the movement of heavy load trucks, cracks has developed on his residential house, requests to monitor cracks.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be monitored periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
PYUNGHWA	05.10.20	Bliadze Omari ID:57001039625 Tel.: 593608264	Damage to Infrastructure / Assets	States, that due to the movement of heavy load trucks, cracks has developed on his residential house, requests to monitor cracks.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be monitored periodically. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review
PYUNGHWA	05.10.20	Korkotadze Giorgi ID:57001012220 Tel.:	Damage to Infrastructure / Assets	States, that his fence is within the borders of road construction. Refuses to accept compensation for fence, due to the small amount, also requests to monitor cracks on residential houses.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be monitored periodically. The Employer is informed regarding compensation issue, waiting for Employers' decision. On 20.01.2021 the condition of cracks on the walls of the building was inspected, corresponding Minutes was prepared.	Under review

PYUNGHWA	05.10.20	Manashvili Lasha ID:01008024332 Tel.:	Damage to Infrastructure / Assets	States, that during the road rehabilitation, cracks on the walls of his residential house increased. The design road is so close to his house, that it will be impossible to live there. Requests compensation for residential house.	On 06.10.2020 the cracks on the house were marked, described and photo documented. Cracks will be monitored periodically. The Employer is informed regarding compensation issue, waiting for Employers' decision.	Under review
PYUNGHWA	07.10.20	Asatiani Roza ID:56001010262 Tel.: 59416185 ?	HSE Concerns	Requests to raise the height of retaining wall up to the yard edge.	On 07.10.2020 the mentioned issue was studied in situ and decision about raising the height of the wall was made. On 28.10.2020 the works were finalized	Accepted
PYUNGHWA	07.10.20	Gelashvili Gela ID:18001044252 Tel.: 593724302	HSE Concerns	Requests to arrange reinforced concrete wall along the yard.	On 07.10.2020 the mentioned issue was studied in situ and decision about arrangement of the wall was made. On 27.10.2020 the works were finalized	Accepted
Construction Contractor	21.10.20	Metivishvili Nana ID: Tel.: 579185750	Other	At km 49+050 soil storage area of Contractor is located. In approximately 250 meters from here settled area is located. Currently	The letter was sent to the Employer about this issue. On 17.11.2020 the letter from Employer was received, with attached Geological conclusion prepared by the specialists of National Agency of Environmental protection	Forwarded to CC

				<p>certain quantity of soil is dumped and Contractor periodically levels the soil. The residents request to stop dumping of more soil, because in their opinion there is a danger of damaging their houses.</p>		
RD	27.10.20	<p>Manjavidze Lia ID: 56001000838 Tel.: 555571986</p>	<p>Damage to Infrastructure / Assets</p>	<p>The cracks has developed on the retaining wall and also opening is observed on the yard edge. There is a danger that the wall will be ruined. Mrs. Lia has a vineyard in her yard and requests compensation for plants, dismounting of old retaining wall and construction of new reinforced concrete wall instead.</p>	<p>On 27.10.2020 the condition of retaining wall was inspected in situ. On 27.10.2020 the corresponding letter was sent to the Employer. The representatives of Employer inspected the mentioned section</p>	<p>Under review</p>

RD	02.11.20	Nozadze Roman ID: 57001033291 Tel.:591920258	Inclusion in LARP	Mr. Roman states, that in the process of road construction in village Phona, the part of his own land plot was cut, requests compensation	On 03.11.2020 during the inspection the mentioned fact was confirmed and corresponding Minutes was prepared. On 04.11.2020 the letter in this regard was sent to the Employer. The Employer agreed to pay compensation. On 27.12.2020 compensation was paid.	Accepted
PYUNGHWA	06.11.20	Gelashvili Vasiko ID: 57001013814 Tel.: 599999900	Restriction or loss of access	At km 48+145-km48+155 the private land plot of Mr. Vasiko is located along the road. At this area there is a cut section and as a result of cut works it is impossible to access the plot. Requests to arrange access road to plot and strengthen the slope with retaining wall.	On 06.11.2020 the mentioned issues were inspected in situ. The representative of Employer also participated in the discussion. The Contractor was requested to arrange access road. The discussion about necessity of arranging retaining wall is ongoing.	Partially Acpt/Rjct
RD	18.12.20	Kiknadze Naziko (legal representative Medea Shengelia) ID:48001005709 Tel.: 557727216	Crop Compensation	Mrs. Naziko states, that during rehabilitation works, part of her plot was cut and three mulberry trees were destroyed.	On 23.12.2020 situation was inspected in situ. The same day Employer was informed about the issue.	Under review

				Requests compensation for for plot and trees.		
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Annex 4 - Parametric Measurements

საქართველო
შპს „ნასეტო გრუპ“



GEORGIA
LTD "NaSeTo Group"

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ძირულა - ხარაგაული - მოლითი (ძირულა- ჩუმათელეთის კკ0+00 დან 24+620 გზის რეაბილიტაცია) პროექტი.

ჰაერის – PM 2.5 + PM10 და ხმაურის ზღერის დონეს ფონური გაზომვის შედეგები.

2020წ. 04 ივლისი 15⁰⁰ – 16⁰⁰

№	გაზომვის წერტილის აღწერა	კოორდინატები	გაზომვის შედეგები		
			მტვერი მკგ/მ ³		ხმაურის ვგერის დონე დბ Amax
			Pm2.5	Pm10	
1	სოფელ ძირულას სკოლასთან	0347894 4660155	71	92	47.2
			96*	112*	76.8*
2	სოფელი სადანმილეს სკოლასთან	0353534 4651009	48	59	48.6
			61*	89*	78.1*

*- გაზომვები ჩატარებულია სატვირთო ავტომანქანების მოძრაობის დროს.

ამინდის პირობები: შტილი, სავალი ნაწილი დამატენიანებულია .

დირექტორი:



საქართველო
შპს „ნასეტო გრუპ“



GEORGIA
LTD "NaSeTo Group"

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ძირულა - ხარაგაუელი - მოვითი (ძირულა- ჩუმათელეთის კკ0+00 დან 24+620
გზის რეაბილიტაცია) პროექტი.

მდინარე ძირულა, ჩხერიმელა და მის შემონაკადებზე წყლის ხარისხის

გაზომვის შედეგები.

2020წ. 04 ივლისი 15⁰⁰ - 16⁰⁰

სინ ჯის №	წყლის ობიექტის დასახელება	კოორდინა ტები	გაზომილი პარამეტრების მაგნიტუდები			
			ფანგბადი მგ/ლ	მწონილი ნაწილაკები მგ/ლ	TPH მგ/ლ	E-Coli
5	მდ. ძირულა ხიდი	0347712 4660190	10.1	48.9	0.01	5000
3	ჯირჯაურა მდ. ჩხერიმელას შემონაკადი	0353453 4651046	10.3	29.4	<0.01	2000
4	ხარაგაუელი, ხიდი	0351753 4652493	11.2	127.4	0.01	4000
2	მდ. ჩხერიმელა შუა მონაკვეთი	0354965 4650326	11.4	132.7	<0.01	3000
1	მდ. ჩხერიმელა ზედა წელი	0356736 4648763	11.5	203.1	<0.01	2000

დირექტორი:

