

Environmental Monitoring Report

Bi-annual Environmental Monitoring Report July 2019

Azerbaijan: MFF Second Road Network Development Investment Program, Project 1

CURRENCY EQUIVALENTS

as of 31 July 2019

Currency unit	–	Azerbaijani Manat
AZN1.00	=	\$0.5894
\$1.00	=	AZN1.6965

ABBREVIATIONS

AAYDA	–	State Agency of Azerbaijan Automobile roads
MOF	–	Ministry of Finance
ADB	–	Asian Development Bank

NOTE{S}

- (i) The fiscal year (FY) of the Government of Azerbaijan (and its agencies) ends on 31 December. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2011 ends on 31 December 2011.
- (ii) In this report, "\$" refers to United States dollars

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Bi-annual Environmental Monitoring Report

Project Number: 45389-002

July 2019

Republic of Azerbaijan:

Second Road Network Development Investment Program, Tranche 1
under Multitranche Financing Facility 2

Lot 1. Construction Supervision of Civil Works Contracts for
Reconstruction of Ujar-Zardab-Agjabadi Section of R32 (70.50 Km)
– Ujar-Zardab, Km 0+000 – Km 37+000

Lot 2. Construction Supervision of Civil Works Contracts for
Reconstruction of Ujar-Zardab-Agjabadi Section of R32 (70.50 Km).
Zardab-Agjabadi, Km 37+000 – 70+500

(Financed by the Asian Development Bank)

Report 1: 1st February 2019 to 30th June 2019

Loan 2921- AZE

The bi-annual environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

CURRENCY EQUIVALENTS

(As of 1 July 2019)

Currency Unit	–	Azerbaijan New Manat (AZN)
AZN 1.00	=	USD 0.93
USD 1.00	=	AZN 1.70

ABBREVIATIONS

ADB	–	Asian Development Bank
AAYDA	–	State Agency of Azerbaijan Automobile Roads
AZN	–	Azerbaijan New Manat
BOD	–	Biological Oxygen Demand
EIA	–	Environmental Impact Assessment
EMP	–	Environmental Management Plan
EPM	–	Environmental Protection Manager
EPP	–	Environmental Protection Plan
GRM	–	Grievance Redress Mechanism
IPC	–	Interim Payment Certificate
PMC	–	Project Management Consultant
PPE	–	Personal Protective Equipment
STD	–	Sexually Transmitted Disease
ADB	–	Asian Development Bank
EMP	–	Environmental Management Plan
EPM	–	Environmental Protection Manager
EPP	–	Environmental Protection Plan
GRM	–	Grievance Redress Mechanism
MENR	–	Ministry of Ecology and Natural Resources
PIU	–	Project Implementation Unit
SSEMP	–	Site-Specific Environmental Management Plan

WEIGHTS AND MEASURES

m – Meter
Km – Kilometer

TABLE OF CONTENTS

I.	INTRODUCTION.....	5
A.	Introduction to Project.....	5
B.	Objectives of Biannual Environmental Reporting.....	6
C.	Methodology	6
D.	Construction Activities and Project Progress during previous six months	7
E.	Project organization and environmental management team	9
F.	Relationships with Contractors, owner, lender, etc.	9
II.	ENVIRONMENTAL MONITORING.....	10
A.	Status.....	10
B.	Results	10
C.	Action	11
III.	ENVIRONMENTAL MANAGEMENT	15
A.	Status	15
B.	Documents.....	15
C.	Inspections and Audits	15
D.	Non-Compliance and Corrective Actions	16
E.	Consultations and Complaints.....	25
F.	Emerging Issues.....	27
G.	Conclusions	27

LIST OF FIGURES

FIGURE 1: LOT-1 WATER MONITORING STATIONS	10
FIGURE 2: LOT-1 AIR MONITORING STATIONS	11
FIGURE 3: LOT-1 NOISE AND VIBRATION MONITORING STATIONS	11
FIGURE 4: LOT-2 WATER MONITORING STATIONS	12
FIGURE 5: LOT-2 AIR MONITORING STATIONS	12
FIGURE 6: LOT-2 NOISE AND VIBRATION MONITORING STATIONS	14
FIGURE 7: LOT-1 PUBLIC CONSULTATION SCHEDULE.....	23
FIGURE 8: LOT-1 PUBLIC CONSULTATION PHOTOS.....	24
FIGURE 9: LOT-2 PUBLIC CONSULTATION PHOTOS.....	26
FIGURE 10: LOT-1 PROGRESS PHOTOS DURING THE REPORTED PERIOD.....	38
FIGURE 11: LOT-2 PROGRESS PHOTOS DURING THE REPORTED PERIOD	45

LIST OF TABLES

TABLE 1: LOT-1 MONTHLY PROGRESS OF THE CONTRACTOR DURING THE LAST FOUR MONTHS.....	7
TABLE 2: LOT- 2 MONTHLY PROGRESS OF THE CONTRACTOR DURING THE LAST FOUR MONTHS.....	7
TABLE 3: LOT-1 NON-CONFORMANCES DETECTED DURING THE REPORTED PERIOD.....	16
TABLE 4: LOT-1 INSTRUCTIONS TO CONTRACTOR DURING THE LAST FOUR MONTHS.....	13
TABLE 5: LOT-2 NON-CONFORMANCES DETECTED DURING THE REPORTED PERIOD.....	15
TABLE 6: LOT-2 INSTRUCTIONS TO CONTRACTOR DURING THE LAST FOUR MONTHS.....	13
TABLE 7: LOT-2 GRIEVANCE REDRESSES MECHANISM.....	16
TABLE 8: LOT-1 INSTRUMENTAL MONITORING RESULTS.....	14
TABLE 4: LOT-2 - INSTRUMENTAL MONITORING RESULTS	18

I. INTRODUCTION

A. Introduction to Project

1. The R-32, Ujar-Zardab-Agjabadi road located in the central region of Azerbaijan is very important for connecting 5 different rural but agriculturally rich regions to the capital city through the Baku-Ganja-Tbilisi M-2 Motorway. This road is considered to be the economic lifeline of the country. The road is 70.5 km long starting from the Ujar intersection of M-2 and passes towards the south and southwest direction. The road passes through flat and low terrain. This road will be a vital link in the national road network.
The Contract Lot 1 a 37km section of R32 starts from the intersection with international road (M2) at Ujar and runs southwards through several villages namely Qarabork, Qazyan, Lek, Xalac, Challi with access roads till Zardab city. It has major intersection at km 31.5 in Zardab city.
2. The Executing Agency for the project is the State Agency of Azerbaijan Automobile Roads(AAYDA)
3. An Initial Environmental Examination (IEE) was carried out for the project in 2018. The IEE report was approved by AAYDA and ADB, and has served as a basis for the development of the specification and contract documents, and for the preparation and pricing of the Contractor Environmental Management Plan (EMP).
4. The Engineer appointed by AAYDA is IRD Engineering s.r.l. The construction contract for Lot 1 was awarded to KORPU-BINA-TIKINTI LLC (KBT) and the construction contract for Lot 2 was awarded to POLAT A.Ş.
5. Key milestones relating to mobilization are summarized below:

Lot-1

Consultant: IRD engineering s.r.l.
Contract No. : ADB Loan 3144AZE
Date of contract signing: 31 October 2018
Start date: 01 December 2018
Period of Execution+24 months'

Contractor: KORPU-BINA-TIKINTI LLC (KBT)
Contract No.: CWC 01/ICB/2018/L1
ADB Loan No.: ADB Loan 2921 AZE
Accepted Contract Amount: AZN 80,192,918.79 including VAT
Date of Contract signing: 31 October 2018
Commencement date: 01 February 2019
Defects Notification Period: 730 days
Time For Completion: 730 days
Original Completion Date: 31 January 2021

Lot-2

Consultant: IRD engineering s.r.l.
Contract No. AZE -011
Date of contract signature: 08 November 2018
Start date: 01 December 2018
Period of Execution: 24 months
Contractor: POLAT YOL YAPI SANAYI VE TICARET A.S.
Contract No.: 01/ICB/2018/L2
Accepted Contract Amount: AZN 59,604,647.11 excluding VAT and Price Adjustment

Date of Contract signature: 19 November 2018
Commencement date: 1 March 2019
Defects Notification Period: 730 days
Time For Completion: 730 days
Original Completion Date: 28 February 2021

A. Objectives of Biannual Environmental Reporting

6. The purpose of the Biannual Environmental Monitoring Report is to provide a summary of the key issues relating to environmental management over the past six months. The summary includes an update on overall project progress, the status of SSEMP implementation, any progress made with environmental management, environmental monitoring results, and other relevant issues such as non-compliance and corrective actions, and monitoring of the Grievance Redress Mechanism (GRM).

7. The Report is prepared by AAYDA and is intended to inform ADB and any other interested parties of the status of environmental management of the project. The Report is summary; more detailed information is included in the monthly and quarterly reports prepared by the Contractors and the Engineer.

C. Methodology

8. The Biannual Environmental Monitoring Report is prepared by reviewing and extracting key information from a number of sources, as follows:

- ☐ Contractors' Quarterly Environmental Management Reports;
- ☐ Contractors' Grievance Registers;
- ☐ Engineer's Quarterly and Monthly Progress Reports;
- ☐ Engineer's Environmental Specialist's Field Reports;
- ☐ Construction instrumented monitoring results;
- ☐ *Ad Hoc* reports from the Contractors on training and public consultation;
- ☐ Correspondence between AAYDA, Engineer and Contractors relating to environmental and social issues.

9. In addition, some information and opinion in the reports results from site visits, technical meetings and public meetings and interviews over the preceding 5 months.

Lot-1

D. Construction Activities and Project Progress during previous four months

10. Key milestones and construction activities relating to the past five months' work are summarized below:

- Table 1 below shows the Contractor's monthly progress throughout the current reporting period.
- During this period, the Contractor carried out site clearances and removal top soil works and continues the road embankment works.
- There were substantial works accomplished on the road construction works during this period such as the following: (i) road embankment works, (ii) laying of crushed base, (iii) asphalt paving works, (iv) excavation of unsuitable works and (v) bridge construction works
- Relocation works for gas, communication and electrical lines has been started and are going on.
- Construction of Bridges No 1, 2, 3 and 5 respectively at km 14+606, 18+173, 20+541 and 31+326 are going on.

Table 1: Monthly Progress of the Contractor during the last four Months

Month	Progress (%)
February	1.18
March	1.00
April	3.53
May	5.86
June	4.73

Lot-2

Construction Activities and Project Progress during previous four months

11. Key milestones and construction activities relating to the past four months' work are summarized below:
- Table 2 below shows the Contractor's monthly progress throughout the current reporting period.
 - site clearance and topsoil removal,
 - earthworks, roadway excavation and excavation of unsuitable material, rock filling, geotextile laying, embankment layers with suitable fill materials, etc.,
 - pipe and box culvert construction,
 - utility relocation survey and identification
 - maintenance of existing and service roads, health and safety surveillance and control of environmental issues
 - Processing aggregates and transportation of materials.

Table 2: Monthly Progress of the Contractor during the last four Months

Month	Progress (%)
March	5.11
April	9.03
May	11.32
June	14.52

Lot-1, Lot-2

E. Project organization and environmental management team

12. There have been no changes to the organization of the environmental management teams within the PIU, Contractors or Engineer over the past 5 months.

The International Environmental Expert Mrs. Carlotta Arquiaga and local environmentalist Mr. Alizamin Mustafayev is intermittent for both Lot-1, Lot-2.

Environmentalist of The contractor Lot-1 is Mr.Anvar Aliyev.
Environmentalist of The contractor Lot-2 is Mr.Khalid Mammadov.

F. Relationships with Contractors, owner, lender, etc.

13. The relationships between the Contractor, Engineer, Owner and Lender are considered normal working relationships.

14. At the working level, communication with regards to environmental issues remains good.

II. ENVIRONMENTAL MONITORING

Lot-1, Lot-2

A. Status

15. Monitoring has been carried out in accordance with the SSEMP
16. The sampling has been carried out by the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan – National Monitoring Department for Environment

Parameters to be monitored to establish a baseline includes: Air and water monitoring: (i) Total Suspended Particulates (TSP); (ii) Sulfur Dioxide (SO₂); (iii) Nitrogen Dioxide (NO₂); and (iv) Carbon Monoxide (CO) Turbidity/Total Suspended Solids (TSS or Transparency) Total Petroleum Hydrocarbon (TPH) at the vicinity of the bridge construction sites.

Lot-1

B. Results

17. Water quality monitoring results for some determinants and some monitoring stations were above Azeri national standards it is not related to the construction works, its normal baseline is high. The full results are provided in Table 1;

Some further observations on the results are provided below:

- Goychay, Garasu, Gizlig rivers and Lower Shirvan Collector had generally higher pH,
- The turbidity in Goychay, Garasu rivers and Lower Shirvan collector was higher than the permitted limit
- Heavy metal levels are all well below the national standards
- Nitrates / Nitrites and other major ions are well below the standards at all locations.
- Oil and grease levels are below the limits.

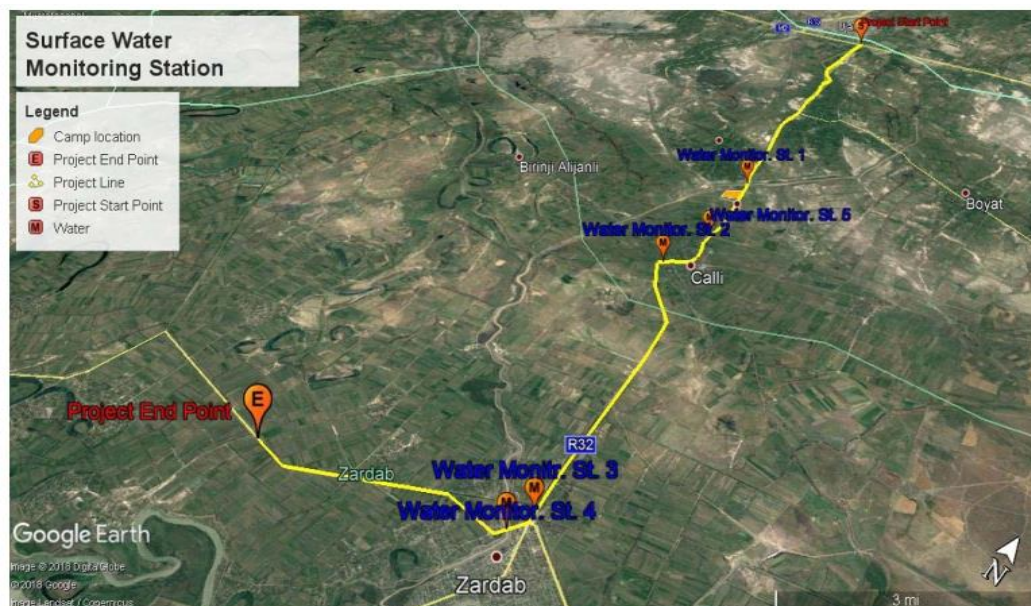


Figure 1. Water monitoring stations

18. All air quality monitoring results for all determinants and all monitoring stations were below Azeri national standards



Figure 2. Air monitoring stations

19. Noise and vibration monitoring results were all below the permitted limits



Figure 3. Noise and vibration monitoring stations

C. Action

20. No action on site is required in response to the monitoring results from the reported period.

Lot-2

Results

21. All water quality monitoring results for all determinants and all monitoring stations were below Azeri national standards during the present reporting period. The full results are provided in Table 3.



Figure 4. Water monitoring stations

22. All air quality monitoring results for all determinants and all monitoring stations were below Azeri national standards during the reporting period.

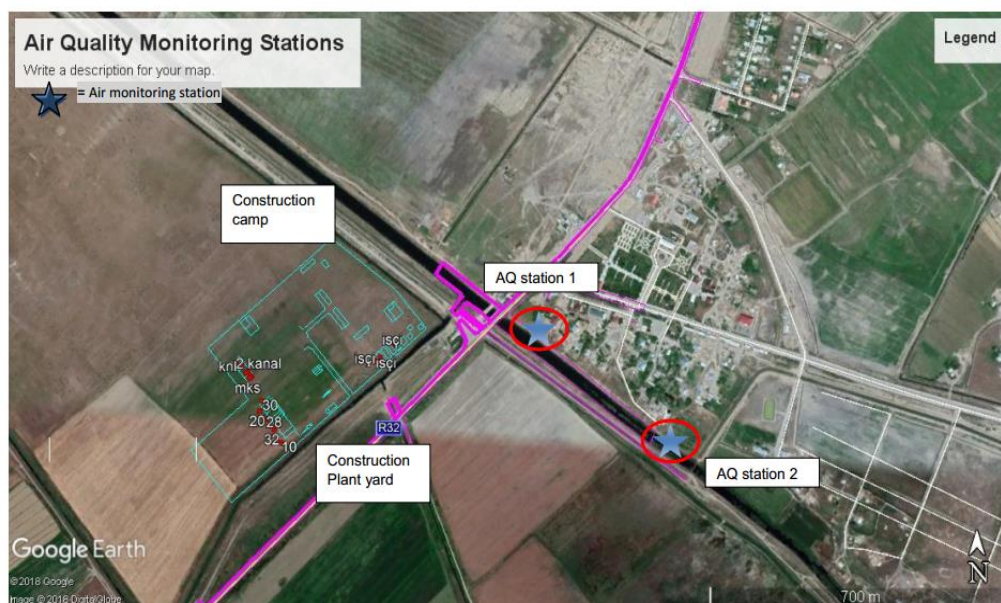


Figure 5. Air monitoring stations

23. Noise and vibration monitoring results were all below the permitted limits during the reporting period.

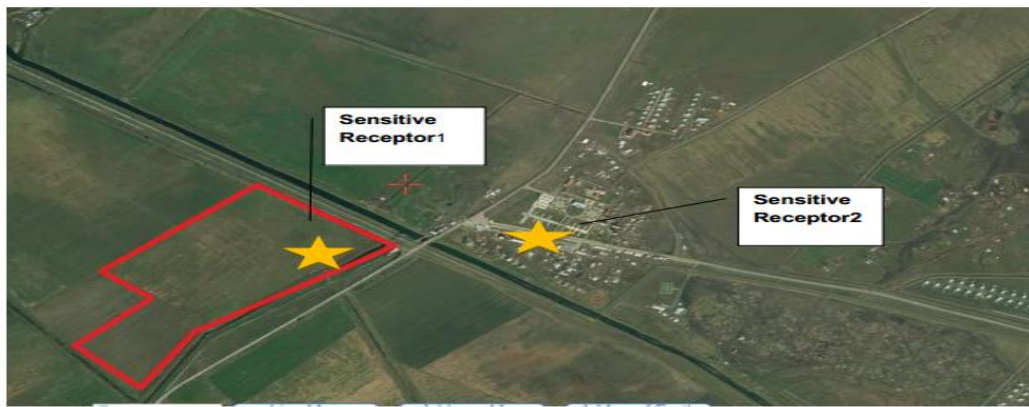


Figure 12. Agjabedi Town Noise and Vibration Monitoring Stations

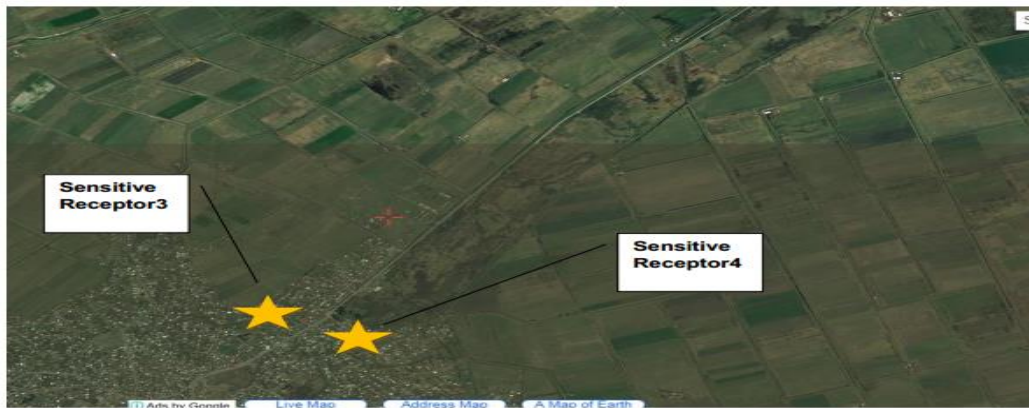




Figure 14. Gorugbaghi Noise and Vibration Monitoring Stations



Figure 6.Noise and vibration monitoring stations

D. Action

24. No action on site is required in response to the monitoring results from the reported period.

III. ENVIRONMENTAL MANAGEMENT

Lot-1, Lot-2

A. Status

25. In general, environmental management has continued to be of an acceptable standard during the present reporting period. Although each site visit by the Engineer observed several minor non-compliances and addressed quickly. General cleanliness is good, and the physical mitigation measures set out in the SSEMP are generally all constructed and functioning as designed.

26. There have been no accidents during the reporting period involving the public.

27. In addition to informal monitoring by the IRD Engineering and Lot-1 KBT and Lot-2 POLAT environmental teams there is a two weekly inspection by IRD Engineering and Lot-1 KBT and Lot-2 POLAT of the camp and working sites. Both Lots use a monitoring template identified in the SSEMP covering all aspects of the works, observations are that work was carried out in accordance with the environmental requirements of the IEE its EMP and the SSEMP during the reporting period.

B. Documents

28. Reporting is generally compliant. An inspection of site documentation showed that all relevant paperwork, including the Grievance Register, was present at the site office.

C. Inspections and Audits

The ADB Representative, Mrs. Paula Araujo, together with PIU Engineer, Mr. Arastun Guliyev visited the site in May 2019.

29. The contractor's EPM conducts *ad hoc* site visits on a daily basis, with a full audit of all sites once a week.

30. The Engineer's National Environmental Specialist visits all sites on a twice-weekly basis, with additional *ad hoc* visits as required.

31. SAAAR Social Specialist Mr. Arastun Guliyev and ADB Local Environmentalist Mr. Shahin Isayev visited Camp Sites Lot-1, 2 on December 20, 2018

32. During the present reporting period The Engineer's International Environmental Specialist visited construction sites on the 3rd to the 14th April 2019.

Lot-1**D. Non-Compliance and Corrective Actions****Table 3.Non-conformances detected during the reported period**

Date	Reference	Requirement	Action to date	Action requirement/comment
January,2019	Maintenance of existing road	The Consultant instructed the contractor to repair the damaged areas urgently and keep the road properly maintained so that general traffic flow on the road is not interrupted.	Improved	It is constantly checked the marks
April,2019	Maintenance of existing road	The Consultant instructed the contractor to deploy increased efforts, repair the distressed spots by filling with good materials, grading, watering and compacting	Improved	It is constantly checked by the Consultant
May,2019	Environmental, health and safety shortcomings	The consultant instructed the contractor about maintenance of Existing Bridge no.05 at km 31+236 and to maintain properly the dangerous big holes on the Garasu river at km 31+236	Improved	It is constantly checked by the Consultant
June,2019	Reminders about Maintenance of Existing and Diversion Roads	<p>The Consultant instructed the contractor the whole road section is dusty and full of depressions and undulations. Dust emissions from the road are dangerous for the traffic and also affecting the people in the project vicinity.</p> <p>At some places repairing of the damaged road sections are in acceptable condition but many other</p>	Improved	It is constantly checked by the Consultant

		<p>places where damaged spots are filled with gravelly soil but not covered with milled asphalt already undulated. These areas need proper grading watering, compaction and covering with milled asphalt.</p> <p>Still numerous depressions are unattended or partly filled but not effective.</p> <p>The overall condition of the existing road is unsafe for the traffic and likely hood of severe accidents.</p>		
June,2019	Maintenance of existing and diversion roads	The poor maintenance of the existing roads and diversion roads	Improved	It is constantly checked by the Consultant
June,2019	Dumping of excavated topsoil and unsuitable materials along road sides	To remove the unsuitable materials from the road sides and dispose to safe spoil-dump sites	Improved	It is constantly checked by the Consultant

33. The Contractor has significantly advanced the construction works on site over the past five months, and has done so within the bounds of the SSEMP; all works on the alignment were compliant, and the site was clean, tidy, and well maintained. Culverts and other working areas were clearly demarcated with warning barriers.
34. Dust control, which was previously reported as being excellent, became problematic during the beginning of summer but was swiftly addressed in each instance by the Contractor following a warning from the Engineer.
35. As usual, the Contractor has made some efforts over the past five months to address the non-compliances that were observed during the various site audits carried out during the last 5 months, however, a number of easily-avoided non-compliances were still noted during audit.
36. At the Contractor's camp a number of non-compliances were noted during the reporting period; the Contractor is always quick to address any non-compliances raised, even if their prevention of re-occurrence could be improved.
37. The consultant reminded the Contractor about maintenance of existing road via official letter AH-KBT-19-R32-Lot 1-012 in January,2019

- To repair the damaged areas urgently and keep the road properly maintained so that general traffic flow on the road is not interrupted.
38. The consultant reminded the Contractor about maintenance of existing road via official letter AH-KBT-19-R32-Lot 1-037 in April, 2019
- To deploy increased efforts, repair the distressed spots by filling with good materials, grading, watering and compacting
39. The consultant reminded the Contractor to follow the below-mentioned environmental, health and safety rules strictly via official letter AH-KBT-19-R32-Lot 1-058, Maintenance of Existing Bridge no.05 at km 31+236 in May, 2019. Dangerous big holes on the Garasu river at km 31+236
40. The consultant reminded the Contractor via official letter via official letter AH-KBT-19-R32-Lot 1-078 Reminders about Maintenance of Existing and Diversion Roads in June, 2019.
- The whole road section is dusty and full of depressions and undulations. Dust emissions from the road are dangerous for the traffic and also affecting the people in the project vicinity.
 - At some places repairing of the damaged road sections are in acceptable condition but many other places where damaged spots are filled with gravelly soil but not covered with milled asphalt already undulated. These areas need proper grading watering, compaction and covering with milled asphalt.
 - Still numerous depressions are unattended or partly filled but not effective.
 - The overall condition of the existing road is unsafe for the traffic and likely hood of severe accidents.
41. The consultant reminded the Contractor via official letter via official letter AH-KBT-19-R32-Lot 1-084 Maintenance of existing and diversion roads in June, 2019:
- The poor maintenance of the existing roads and diversion roads
42. The consultant reminded the Contractor via official letter via official letter AH-KBT-19-R32-Lot 1-092 Dumping of excavated topsoil and unsuitable materials along road sides in June, 2019:
- To remove the unsuitable materials from the road sides and dispose to safe spoil-dump sites

All the above-mentioned Health, safety and environmental shortcomings have found their solutions after the official letters had addressed to the Contractor regularly.

Table 4: Instructions to Contractor during the last Four Months

No	Date	Description of Instruction
1		AH-KBT-19-R32-Lot 1-058 Maintenance of Existing Bridge no.05 at km 31+236 in May,2019
2		AH-KBT-19-R32-Lot 1 -078 Maintenance of Existing and Diversion Roads
3		AH-KBT-19-R32-Lot 1-084 Maintenance of existing and diversion roads
4		AH-KBT-19-R32-Lot 1-092 Dumping of excavated topsoil and unsuitable materials along road sides

Lot-2**Non-Compliance and Corrective Actions****Table 5.Non-conformances detected during the reported period**

Date	Reference	Requirement	Action to date	Action requirement/comment
May,2019	Maintenance of existing road and dust control	The Consultant instructed the contractor about to give full effort maintenance of existing road, traffic management and dust control by increasing the manpower, material and equipment immediately.	Improved	It is constantly checked by the Consultant
May,2019	Health, safety and environmental shortcomings	The Consultant instructed the contractor about watering shall be done adequately and more frequently to subside the dust and ensure environment protection Existing and diversion roads shall be maintained in good condition by filling depressions, leveling and compacting. Flagmen and temporary traffic signs shall be arranged to control safe traffic flows around construction sites.	Improved	It is constantly checked by the Consultant
June,2019	Complaint letter from the local Road Maintenance Department	The Consultant instructed the contractor about damages of R33 – Agdam-Hindarkh-Agchabadi road caused by overloaded trucks of POLAT A.Ş, the Contractor of R32, Lot-2 and to investigate the issue jointly with the representatives of Local Road	Improved	It is constantly checked by the Consultant

		Maintenance Department and take immediate and appropriate remedial measures about		
June,2019	Maintenance of existing and diversion roads	The consultant instructed the contractor to repair the damaged existing road immediately to satisfactory and safe condition and also to increase construction activities	Improved	It is constantly checked by the Consultant
June,2019	Dumping of excavated topsoil and unsuitable materials along road sides	To remove the unsuitable materials from the road sides and dispose to safe spoil-dump sites	Improved	It is constantly checked by the Consultant

43. The Contractor has significantly advanced the construction works on site over the past 4 months, and has done so within the bounds of the SSEMP; all works on the alignment were compliant, and the site was clean, tidy, and well maintained. Culverts and other working areas were clearly demarcated with warning barriers.
44. Dust control, which was previously reported as being excellent, became problematic during the beginning of summer but was swiftly addressed in each instance by the Contractor following a warning from the Engineer.
45. As usual, the Contractor has made some efforts over the past months to address the non-compliances that were observed during the various site audits carried out during the last 5 months, however, a number of easily-avoided non-compliances were still noted during audit.
46. At the Contractor's camp a number of non-compliances were noted during the reporting period; the Contractor is always quick to address any non-compliances raised, even if their prevention of re-occurrence could be improved.
47. The consultant reminded the Contractor about maintenance of existing road and dust control via official letter AH-PLT-19-R32-Lot 2-051 in May,2019
- To give full effort maintenance of existing road, traffic management and dust control by increasing the manpower, material and equipment immediately.
48. The consultant reminded the Contractor via official letter AH-PLT-19-R32-Lot 2-055 Maintenance of existing and diversion road – Health, safety and environmental shortcomings in May,2019
- Watering shall be done adequately and more frequently to subside the dust and ensure environment protection
 - Existing and diversion roads shall be maintained in good condition by filling depressions, leveling and compacting.
 - Flagmen and temporary traffic signs shall be arranged to control safe traffic flows around construction sites.
49. The consultant reminded the Contractor via official letter AH-PLT-19-R32-Lot 2-064 Complaint letter from the local Road Maintenance Department in June, 2019.

- About damages of R33 – Agdam-Hindarkh-Agchabadi road caused by overloaded trucks of POLAT A.Ş, the Contractor of R32, Lot-2 and to investigate the issue jointly with the representatives of Local Road Maintenance Department and take immediate and appropriate remedial measures.
50. The consultant reminded the Contractor via official letter via official letter AH-PLT-19-R32-Lot 2-065 - Maintenance of existing and diversion roads in June, 2019:
- To repair the damaged existing road immediately to satisfactory and safe condition and also to increase construction activities
51. The consultant reminded the Contractor via official letter via official letter AH-PLT-19-R32-Lot 2-069 - Dumping of excavated topsoil and unsuitable materials along road sides in June, 2019:
- To remove the unsuitable materials from the road sides and dispose to safe spoil-dump sites

All the above-mentioned Health, safety and environmental shortcomings have found their solutions after the official letters had addressed to the Contractor regularly.

Table 6: Instructions to Contractor during the last Four Months

No	Date	Description of Instruction
1	May,2019	AH-KBT-19-R32-Lot 2-051 Maintenance of existing road and dust control
2	May,2019	AH-KBT-19-R32-Lot 2 -055 Maintenance of Existing and Diversion Roads-HSE issues
3	June,2019	AH-KBT-19-R32-Lot 1-064 Complaint letter from the local Road Maintenance Department
4	June,2019	AH-KBT-19-R32-Lot 1-065 Maintenance of existing and diversion roads
5	June,2019	AH-KBT-19-R32-Lot 1-069 Dumping of excavated topsoil and unsuitable materials along road sides

Lot-1

E. Consultations and Complaints

52. During the present reporting period public consultations were held on the following dates:

- α. 20th April 2019: Challi village.
- b. 10th June 2019: Khalaj village

53. Detailed lists of the participants were provided to Engineer within monthly and quarterly reports. Some examples of meeting photos are provided in Figure 7.

54. During each meeting the EPM delivered a presentation, which focused on three main subjects:

- α. The construction process and schedule;
- β. HIV awareness; and
- χ. The Grievance Redress Mechanism.

55. There was no any grievance at this period.

The Contractor KBT has planned the Public Consultation as below-mentioned dates:

Location	Date of meeting 1	Date of meeting 2	Date of meeting 3	Date of meeting 4	Date of meeting 5	Date of meeting 6
District of Ujar and Zardab	January, 2019	April, 2019	July, 2019	October, 2019	January, 2020	April, 2020
	July, 2020	October, 2020				
Villages f the Districts	January, 2019	April, 2019	July, 2019	October, 2019	January, 2020	April, 2020
	July, 2020	October, 2020				

Figure 7. Public Consultation schedule



Figure 8. Public Consultation Photos

Lot-2

Consultations and Complaints

56. During the present reporting period public consultations were held on the following dates at the Contractor Camp:

α. 20th April 2019: Goruqbaghi village.

57. Detailed lists of the participants were provided to Engineer within monthly and quarterly reports. Some examples of meeting photos are provided in Figure 8.

58. During each meeting the EPM delivered a presentation, which focused on three main subjects:

β. The construction process and schedule;

χ. HIV awareness; and

δ. The Grievance Redress Mechanism.

59. There was only a grievance to date and the details of it have been included in Table 7

Table 7. Grievance Redress Mechanism

No	Tranche	Location	Date received	How grievance was received	Complaint	Description of the issues/complaints	Contact details	Notes, undertaken actions	Status
1	Lot-2	Goruqbagi village	20.04.2019	Verbal	Gorugbagi villagers	Dust problem	Gorugbagi Municipality	The Engineer informed the contractor about the dust problem via official letters and the contractor increased the water trucks at the construction site and sprinkling water on the dusty areas continued regularly.	Solved

Meeting Photos



Figure 9. Public Consultation Photos

Lot-1, Lot-2

F. Emerging Issues

60. No specific emerging environmental issues have been identified with work and the contractors are vigilant on the potential for adverse impact and continue implementing the mitigation measures identified in the Contractor Site Specific Environmental Management Plan (SSEMP).

G. Conclusions

61. The work on the road alignment has progressed significantly over the past 4 months, the contractor in coordination with the Stakeholders attending Environmental safeguard issues as required under the contract. In general, environmental management had been satisfactory during the construction period. The Contractor had put efforts to manage the compliance issues according to the SSEMP. ADB and the Engineer provided technical support to the Contractor as needed on environmental management.
62. The Agency in coordination with the contractor and consultant will continue monitoring of Environmental safeguard issues and update the Bank time to time as required under the loan agreement

Lot-1

Table 8: Instrumental Monitoring Results

1. Introduction

National Environmental Monitoring Department of Ministry of Ecology and Natural Recourses of Azerbaijan Republic has carried out air, surface water, noise and vibration monitoring on the Project of Reconstruction of Ujar-Zardab Road (R32), Lot 1: Km 0-37 in 04.08.2019 in accordance with "Decree about rules of environmental and natural resources state monitoring" approved by Cabinet of Ministers decision No 90 dated 01.07.2004. Measurement was done, samples were taken and analyses were carried out in the laboratory in order to learn ecological conditions of those areas. Analyses in the laboratory were carried out according to extraction, calorimetric, conductometric and titrimetric methods by using local standards.

2. Result and National standards

Air content, surface water content, noise and vibration levels (dB) have been measured in Garabork, Gazian, Lak and Khalaj villages of Ujar district situated in construction area and it became clear that most elements meet the norms.

All the results were compared with the following local standards:

- Noise standards DÜST 17187 (General Standards and Requirements), President's decree No 796 dated 08.07.2008
- Maximum available vibration level, (General Standards and Requirements), President's decree No 796 dated 08.07.2008
- Available concentrations of cyclical elements at work site GOST 12.1.00588, Ministry of Ecology and Natural Recourses, 2003;
- Available concentrations of toxic elements in surface water, decision No 1, Supervision Committee for Use of Ecology and Natural Resources, 1994.



**AZƏRBAYCAN RESPUBLİKASININ
EKOLOGIYA VƏ TƏBİİ SƏRVƏTLƏR
NAZİRLİYİ**

**ƏTRAF MÜHİT ÜZRƏ MİLLİ MONİTORİNG
DEPARTAMENTİ**

Poçt İndeksi: Az 1154, Bakı şəhəri,
Heydər Əliyev pr. 10
Tel:(+99412) 440-30-26; Faks:(+99412) 441-51-23

Elektron poçtu:
milli.monitoring@mail.ru

“Körpü-Bina-Tikinti” MMC-nin
direktoru Xəliq Göyüşova

«20» 08 2019-cu il

№ 19/234

Hörmətli Xəliq müəllim,

24 iyul 2019-cu il tarixli 6 nömrəli müqaviləyə əsasən göstərilən məntəqələrdə aparılmış monitorinq nəticələrini təqdim edirik.

Qoşma: 5 vərəq

Hörmətlə,

Direktor

Ramal Bağirov

Concentration of pollutants in atmosphere air (mg/m³)

Monitoring points	Ingredients	Quantity of ingredients (Point 1)	Available consistence limit
Ujar district. Garabork village (km 00+500)	PM 2.5	0.022	0.025
	PM10	0.040	0.050
Ujar district. Khalaj village (17+500)	PM 2.5	0.019	0.025
	PM10	0.050	0.050
Zardab district. Challi village (km 20+300)	PM 2.5	0.023	0.025
	PM10	0.040	0.050
Zardab district (km 30+500)	PM 2.5	0.022	0.025
	PM10	0.035	0.050

Noise level (dB)

Monitoring points	Parameters	Measurement results, dB (Point 1)	Available noise limit, dB
Ujar district. Garabork village (km 00+500)	noise	54.4	70
Ujar district. Gazian village (km 3+800)	noise	50	70
Ujar district. Khalaj village (17+500)	noise	50	70
Zardab district. Challi village (km 20+300)	noise	55	70
Zardab district (km 30+500)	noise	55	70

Vibration level (dB)

Monitoring points	Parameters	Measurement results (Point 1)	Available noise limit
Ujar district. Garabork village (km 00+500)	vibration	60	70
Ujar district. Gazian village (km 3+800)	vibration	50	70
Ujar district. Khalaj village (17+500)	vibration	50	70
Zardab district. Challi village (km 20+300)	vibration	60	70
Zardab district (km 30+500)	vibration	55	70

The results of physical-chemical and microbiological analysis held on water samples (mg/l)

Ingredients	Unit of measurement	Ujar Lak vil. Goychay river (15+300)	Ujar Khalaj vil. Canal km(30+200)	Zardab town Canal km(30+200)	Zardab town Garasu river (km 31+500)	Available consistence limit
pH	-	7.8	7.5	7.6	7.8	6.0-9.0
Electrical conductivity	X10 ³ cm/cm	0.569	1.804	1.78	0.489	-
Limpidity	cm	7	5	24	1	>30
Turbidity	Mg/l	180	165	21.2	641	>30
Solved oxygen	(Mg/l,%)	5.6	5.5	6.7	6.4	4-6
		65.2	64.3	68.1	75.4	
Biological consumption of oxygen	Mg/l	0.82	1.3	2.04	0.65	3
Calcium ions, Ca ²⁺	Mg/l	48	87.9	80.4	48.0	-
Magnesium ions, Mg ²⁺	Mg/l	19.5	62.2	64.3	13.	-
Chloride ions, Ca ²⁺	Mg/l	21.4	148.9	141.1	20.6	350.0
Sulfate inons,3 SO ₄ ⁻²	Mg/l	225.8	225.9	194.2	146.4	-
Bocarbonate ions, HCO ₃ ⁻	Mg/l	0	0	0	0	-
Na ⁺ + Ka ⁺ ions	Mg/l	63.4	56	91.2	35.5	-
Sum of ions, Σ	Mg/l	491.3	879.1	721.6	362.4	<1000
Nitrite ions, NO ₂ ⁻	Mg/l	0.01	0.06	0	0.03	3.3
Nitrate ions, NO ₃ ⁻	Mg/l	0.56	0.19	0.67	1.62	45.0
Ammonium ions, NH ₄ ⁺	Mg/l	0	0	0	0	0.5
A bacterial group of intestine (ABGI)	number/l	4000	80000	71000	8000	1000
E-coli (bacteria that cause conventional disease)	number/l	0	19000	0	1500	1000

Lot-2

Table 9: Instrumental Monitoring Results



AZƏRBAYCAN RESPUBLİKASI
EKOLOGIYA VƏ TƏBİİ SƏRVƏTLƏR NAZİRLİYİ
ƏTRAF MÜHİT ÜZRƏ MİLLİ MONİTORİNG DEPARTAMENTİ
LABORATORİYA MƏRKƏZİ

AZ 1123 Bakı, Xətai rayonu, Xudu Məmmədov küçəsi 3
Telefon: (+99412) 379-40-21, Faks: (+99412) 379-40-21
E-poçt: mlaboratoriya@gmail.com
<http://eco.gov.az/e-lab.php>

№ 19-01/51
"17" sentyabr 2019-cu il

"Polat Yol Sanaye ve Ticaret A.Ş"
şirkətinin baş icraçı direktoru
Özkök Zafer Kemala

Ətraf Mühit üzrə Milli Monitoring Departamentinin Laboratoriya Mərkəzinin "Polat Yol Sanaye ve Ticaret A.Ş" şirkəti ilə bağlanmış 05.09.2019-cu il tarixli, 3 nömrəli müqavilə əsasında 10.09.2019-cu il tarixində Laboratoriya Mərkəzinin əməkdaşı tərəfindən ölkə ərazisində dövlət əhəmiyyətli yol infrastrukturunun təkmilləşdirilməsi işlərinin tərkib hissəsi olan Ucar-Zərdab-Ağcabədi Yolunun Bərpası ilə əlaqədar sozluğədən ərazidə ekoloji səviyyənin (havanın, suyun keyfiyyəti, səs və vibrasiyanın səviyyəsinin yoxlanması) monitorinqi aparılmışdır.

Monitoring zamanı əvvəlcədən müəyyən olunmuş koordinatlar üzrə götürülmüş nümunələr üzərində aparılan analizlərin nəticələri Sizə təqdim olunur.

Qoşma: "5" vərəq

Hörmətlə,

Rəis :

Vasif Əliyev

Azerbaijan Republic
Ministry of Ecology and Natural Resources
National Environment Monitoring Department
Laboratory Center

To: Ozkok Zafer Kemal
Executive Director of
“Polat Yol Yapi Sanayi ve Ticaret”

Based on the contract #3 dated 05.09.2019, signed between National Environment Monitoring Department Laboratory Center and “Polat Yol Yapi Sanayi ve Ticaret”, on 10.09.2019 the specialist of the Laboratory Center has conducted an ecological monitoring (air and water quality, noise and vibration level) of Reconstruction of Ujar – Zardab – Agjabedi Road (R32), Zardab – Agjabedi Section Lot 2 km37.00- km70.50 project area functioning as an integral part of the work on improving the state road infrastructure in the country.

We are submitting you the results of the analyses conducted on the samples taken from the pre-determined coordinates during monitoring.

Enclosure: 5 pages

Sincerely,
Chief Vasif Aliyev

Noise level

No	Monitoring point	Parameters dBA	Measurement results	Permissible hardness limit
1	Gorugbagi (km 47+590)	Noise	28	70
2	Najafgulubeyli village (km 25+750)	Noise	58	70
3	Camp area (km59+000)	Noise	27	70
4	Kehrizli - Sherefkhanli Quarry	Noise	60	70

No	Monitoring point	Parameters dBA	Measurement results	Permissible hardness limit
1	Gorugbagi (km 47+590)	vibration	27.7	77
2	Najafgulubeyli village (km 25+750)	vibration	56	77
3	Camp area (km59+000)	vibration	26	77
4	Kehrizli - Sherefkhanli Quarry	vibration	58	77

Leading specialist of
laboratory center



Osmanov Sübhan

Results of the physical - chemical analyses of the taken water samples
(mq/l)

No	Name of the ingredient	Unit of measurement	Kur river (50km+060km)	Upper Garabagh channel (km58+0/4)	Permissible hardness limit
1	Hidrogen indicator pH	-	8.0	7.7	6.5-8.5
2	Transparency	sm	15	23	≥30
3	Turbidity	NTU	74.3	18.9	--
4	Electrical conductivity	x10 ⁻³ Sm/sm	0.807	2.600	--
5	biological consumption of oxygen (OBS ₅)	mqO ₂ /l	0.8	1.7	6.0
6	Oxygen soluble in water	mqO ₂ /l %	5.9 67.8	6.10 64.4	≥4.0
7	Kalsium ionu, Ca ²⁺	mq/l	40.1	100.3	-
8	Magnezium ionu, Mg ²⁺	mq/l	18.1	65.6	-
9	Xlorid ionu, Cl ⁻	mq/l	65.9	213.4	350.0
10	Sulfat ionu, SO ₄ ²⁻	mq/l	219.0	707.2	500.0
11	Hidrokarbonat ionu, HCO ₃	mq/l	289.0	316.3	-
12	Karbonat ionu, CO ₃	mq/l	0	0	-
13	Na ⁺ K ⁺ ionu	mq/l	107.6	192.1	-
14	Ammonium, NH ₄	mq/l	0	0	0.5
15	Nitritlər, NO ₂	mq/l	0.07	0.11	3.3
16	Nitratlar, NO ₃	mq/l	5.9	14.2	45.0
17	Total ions	mq/l	746.17	1609.2	≤1000
18	E. coli bacterial group (BÇBQ)	ədəd/l	96000	82000	1000
19	Escherichia coli	ədəd/l	750	870	1000

Head specialist of the
laboratory center



Aybaniz Duşdurova

Remnants of pollutants in atmospheric air






No	Monitoring point	Ingredients mkq/m ³	Amount of the component	Permissible hardness limit
1	Gorugbagi (km 47+590)	PM 10	37.8	50
2	Najafgulubeyli (km 25+750)	PM 10	31.9	50
3	Camp area (km59+000)	PM 10	28.8	50
4	Kehrizli - Sherefkhanli Quarry	PM 10	33.6	50

Leading Specialist of the
Laboratory Center



Lot-1 - Progress photos during the reported period

Figure 10.

 <p>Protection of Special Bird nests provided at construction site</p>	 <p>Protection of Special Bird nests provided at construction site</p>
 <p>Protection of Special Bird nests provided at construction site</p>	 <p>Topsoil stockpile at construction site</p>
 <p>Topsoil material will be used on slope protection</p>	 <p>Topsoil material will be used on slope protection</p>



Construction site, km 36



The trees hinder the construction are removed from road edge and planted at different areas which local Ecological Department appointed



Relocation of trees hinder the construction works



Construction site, km 36+500



Construction site, km 25+090



Relocation of trees hinder the construction works



Relocation of trees hinder the construction works



Construction site, km 24+800



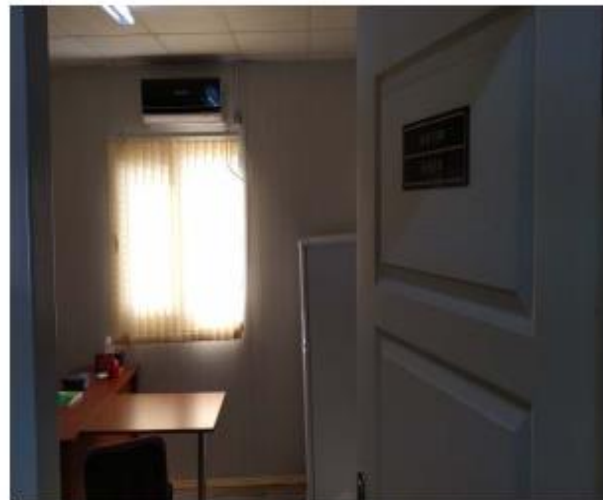
Repairing of service roads



First Aid Room and Doctor provided at Camp site



First Aid Room



First Aid Room



Dust suppression measures provided



All workers provided with PPE



First aid room and doctor provided



Waste water pumps every week



Site visit provided with Consultants' representatives



Construction of Auto-service and oil production store-house



Canteen and resting place provided for all employees



Cold portable water provided due to summer season



Water spreading against dust emissions provided at all site



Water spreading against dust emissions provided at all site



Construction site, km 25



New temporary bridge constructed and opened to use for construction of Bridge No 5



New temporary bridge constructed and opened to use for construction of Bridge No 5



Water spreading against dust emissions provided at all site



Relocation works, km 20



Auto-service constructed and opened to use



Construction Camp



Construction Camp



Public consultation provided in 19.06.2019



Public consultation provided in 19.06.2019



HSE, Fire and AIDS trainings provided in 10.06.2019



HSE, Fire and AIDS trainings provided in 10.06.2019



Watering of service roads provided at all site



Construction site

Lot-2 - Progress photos during the reported period

Figure 11.

Photo 2. Public Consultation



Photo 3. Public Consultation



Photo 4. HIV/AIDS Awareness Program



Photo 5. Training about scorpion and snake bites



Photo 6. Information about the heatstroke



Photo 7. Sign showing the medical point



Photo 8. Site work at Km 43+000



Photo 9. Km 39+000 Fencing



Photo 10. Prohibition and Warning signs



Photo 11. Km 37+000



Photo 12. PPT Problem



Photo 13. Solution

