

Environmental Monitoring Report

Project Number: 45389-004
July 2019

AZE: Second Road Network Development Investment Program, Tranche 2

Prepared by Azerbaijan Automobile Roads State Agency for the Republic of Azerbaijan and the Asian Development Bank.

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: 45389-004

July 2019

Republic of Azerbaijan:

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

Upgrading of Yevlakh-Zagatala-Georgian Border road (M5), Section
Lot 1.Khaldan-Suchma (Km 0+300 to Km 33+100)

Lot 2.Suchma-Shaki Roundabout (Km 33+100 to Km 46+120) and
Rehabilitation of R-57 Road (Km 46+000 of M-5 to Sheki Town)

(Financed by the Asian Development Bank)

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

Loan 3144- AZE

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
IEE	–	Initial Environmental Examination
EMP	–	Environmental Management Plan
EPM	–	Environmental Protection Manager
GRM	–	Grievance Redress Mechanism
PPE	–	Personal Protective Equipment
ADB	–	Asian Development Bank
EMP	–	Environmental Management Plan
EPM	–	Environmental Protection Manager
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.....	8
C.	Methodology	8
D.	Construction Activities and Project Progress during previous four months	8
E.	Project organization and environmental management team.....	11
F.	Relationships with Contractors, owner, lender, etc.	11
II.	ENVIRONMENTAL MONITORING.....	12
A.	Status.....	12
B.	Results	12
C.	Action.....	13
III.	ENVIRONMENTAL MANAGEMENT	16
A.	Status	16
B.	Documents.....	16
C.	Inspections and Audits	16
D.	Non-Compliance and Corrective Actions	17
E.	Consultations and Complaints	26
F.	Emerging Issues	30
G.	Conclusions	30

LIST OF FIGURES

FIGURE 1: PROJECT LOCATION MAP.....	5
FIGURE 2: LOT-1 CAMP LAYOUT.....	6
FIGURE 3: LOT- 2 CAMP LAYOUT.....	6
FIGURE 4: Lot-1 AIR MONITORING STATIONS.....	12
FIGURE 5: LOT-1 NOSIE/VIBRATION MONITORING STATTIONS.....	13
FIGURE 6: LOT-1 WETER MONITORING STATIONS.....	13
FIGURE 7.LOT-2 WATER MONITORING STATIONS	14
FIGURE 8.LOT-2 AIR MONITORING STATIONS	15
FIGURE 9: LOT-2 NOISE/VIBRATION MONITORING STATIONS.....	15
FIGURE 10: METAL WASTE AT THE CONSTRUCTION SITE.....	20
FIGURE 11: CONCRETE WASTE AT THE CONSTRUCTION SITE.....	20
FIGURE 12: NEED OF PHYSICAL BARRIER.....	21
FIGURE 13: EXCESSES OF THE OLD CULVERTS.....	21
FIGURE 14: MUD FLEW INTO THE WATER.....	21
FIGURE 15. UNSAFE PLACE FOR GENERATOR	25
FIGURE 16.CONCRETE WASTE	25
FIGURE 17: LOT-1 PUBLIC CONSULTATION SCHEDULE.....	26
FIGURE 18: LOT-1 PUBLIC CONSULTATION PHOTO.....	27
FIGURE 19: LOT-2 PUBLIC CONSULTATION SCHEDULE.....	28
FIGURE 20: LOT-2 PUBLIC CONSULTATION PHOTO.....	29
FIGURE 21: LOT-1 PROGRESS PHOTOS DURING THE REPORTED PERIOD.....	40
FIGURE 22: LOT-2 PROGRESS PHOTOS DURING THE REPORTED PERIOD.....	46

LIST OF TABLES

TABLE 1: Lot-1 Monthly Progress of the Contractor during the last four months.....	9
TABLE 2: Lot-2 Monthly Progress of the Contractor during the last four months.....	11
TABLE 3: Lot-1 Non-conformances detected during the reported period.....	17
TABLE 4: Lot-1 Instructions to Contractor during the last four months	22
TABLE 5: Lot-2 Non-conformances detected during the reported period.....	23
TABLE 6: Lot-2 Instructions to Contractor during the last four months	25
TABLE 7: Lot-2 Grievance Redress Mechanism Book.....	29
TABLE 8: Lot-1 Instrumental Monitoring Results.....	31
TABLE 9: Lot-2 Instrumental Monitoring Results.....	36

I. INTRODUCTION

Lot-1, Lot-2

A. Introduction to Project

1. The project consists of two road segments: (i) M-5 Road which starts after the first roundabout with M-4 at Khaldan (before a small Y junction) and ends at the Y junction to Shaki, with a total distance of around 46.5 Km; and (ii) R-57 Road, which starts at the Y junction with M-5 and ends at the roundabout at the entrance to the main city of Shaki, having a length of around 11 Km. The M-5 segment shall be constructed to Category II, while R-57 shall be at Category III. The entire M-5 is the Yevlakh – Zagatala – Georgian border Road, an independent highway segment that leads to the northwestern Georgian Border across Mazimchay. The M-5 segment is mainly a 2-lane paved road and crosses 2 districts: Yevlakh and Shaki. The reconstruction of these road segments will improve connectivity to the tourism city of Shaki



Figure 1. Project Location Map



Figure 2.Lot-1 Camp Layout



Figure 3.Lot-2 Camp Layout

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 EIA 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 SSEMP includes a set of 4 main plans (Camp, Workshop, Plant Operation and Road Construction) and 8 sub plans (Water, Air Pollution, Noise, Waste, Soil, Site Drainage, Borrow Pit, Flora & Fauna and Cultural and Archaeological Find and Grievance Redress Mechanism).
5. The Engineer appointed by AAYDA is IRD Engineering s.r.l. The construction contract for Lot 1 was awarded to AzVirt LLC and Lot-2 was awarded to KOLIN A.Ş.

Bi-annual environmental monitoring report covers:

1. First: 1st March 2019 to 30st June 2019

6. Key milestones relating to mobilization are summarized below:

Consultant: IRD Engineering s.r.l.
Contract No. : ADB Loan 3144AZE
Date of contract signing: 08 November 2018
Start date: 01 December 2018

CIVIL WORKS CONTRACT
Contractor: Lot-1 AzVirt, L.L.C and Lot-2 KOLIN A.Ş
Contract No. : 02/2017/AZE/L1

Date of Contract signing: 28 November 2018
Commencement date: 1 March 2019
Defects Notification Period: 24 months' Time
Time for Completion: 24 months
Original Completion Date: 1 March 2021

Lot-1, Lot-2

A. Objectives of Biannual Environmental Reporting

7. 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).

8. 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

9. 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;
- ☐ Pre-construction instrumented monitoring results;
- ☐ *Ad Hoc* reports from the Contractors on training and public consultation; and
- ☐ Correspondence between AAYDA, Engineer and Contractors relating to environmental and social issues.

10. In addition, some information and opinion in the reports results from site visits, technical meetings and public meetings and interviews over the preceding 4 months.

Lot-1

D. 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 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

- Utility relocations - Surveying and identification of the utilities, which might require replacement or protection are being done with the participation of the relevant Stakeholder,
- Design and calculation report for bridge H2 at Km 9+413 (Rev.0) has been reviewed and approved for construction.
- Bridge H2 (Upper Shivan Channel bridge) at Km 9+450: All the piling works for the foundation of Abutment A1 have been completed. Drilled and casted piles from No. 1 to 12.

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

Month	Progress (%)
March	2.63
April	6.05
May	11.46
June	17.77

Lot-1, Lot-2

MATERIAL SOURCING & STOCKPILING:

Until now the Contractor has identified four borrow pits, the detailed status of which is as here under:

- **Alijanchay:** This borrow area is located at approximately 2 Km offset on right side (towards Sheki) from Km 19 of the project road. The material of the borrow area has been found suitable for embankment fill and sub-base. The quantities required for these two items involved in the project road are already stockpiled near Km 17+400 (embankment fill) and within Camp premises (Granular Sub-base).
- **Jafarabad:** This borrow area is located at offset distance of 2 Km on LHS (towards Sheki) from km 39+000 of the project road. The material of this borrow area has been found suitable only for embankment fill including backfill of culverts and formation layers. Quantity available in the area is abundant.
- **Kish River:** This borrow area is located at a lead distance of about 2 Km (further towards Sheki city) from Km 46+000 (End) of the project road. The material of this borrow area has been found suitable for aggregates required for asphalt, cement concrete, sub-base and crushed aggregate base. The material is also suitable for all kind of embankment and backfill. The quantity available in the area is abundant. While stockpiles of sub-base and crushed aggregate base are made near Km 12+000, aggregates required for cement concrete and asphalt are stockpiled within the premises of Sheki Plants.
- **Turyanchay:** This area is located at a lead distance of about 32 Km from start point of

the project road towards Agdash town (on M-4 road). The material of this borrow area has been found suitable for asphalt, cement concrete, sub-base and embankment fill. The materials of this borrow area will be used for this project road (Lot-1) only when necessity arises over the other identified borrow areas. While stockpiles of granular subbase are made near Km 6+000, that for concrete and asphalt are stockpiled within the premises of Agdash Plants.

The Contractor ensures that:

- Contractor prepared a Material Source Management and Reinstatement Plan or a Borrow Pit Action Plan (BAP) that should be submitted as part of the SSEMP to the Engineer prior to the start of construction.
- Borrow Pit restoration follows the completion of works in full compliance all applicable standards and specifications.
- Arrangements for opening and using material borrow pits contain enforceable provisions.
- The excavation and restoration of the borrow areas and their surroundings, in an environmentally sound manner to the satisfaction of the Engineer will be required before final acceptance.

Lot-2

Construction Activities and Project Progress during previous four months

12. Key milestones and construction activities relating to the past four 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
- ☐ Utility relocations - Surveying and identification of the utilities, which might require replacement or protection are being done with the participation of the relevant Stakeholder,
- ☐ During this month started works of Dahna river bridge construction at km 35+700. Works done are demolition of the existing Dahna bridge, mobilization of equipment, preparation of working platform for piling works, drilling and casting of two piles of abutment A1

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

Month	Progress (%)
March	1.43
April	2.09
May	5.47
June	8.50

Lot-1, Lot-2

E. Project organization and environmental management team

13. There have been no changes to the organization of the environmental management teams within the PIU, Contractors or Engineer over the past 4 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 Qalib Mirzayev.
Environmentalist of The contractor Lot-2 is Mr.Orkhan Aliyev.

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

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

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

II. ENVIRONMENTAL MONITORING

Lot-1, Lot-2

A. Status

16. Monitoring has been carried out in accordance with the SSEMP
17. 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 8;

Some further observations on the results are provided below:

- The Alijanchay river and Yukhari Shirvan channel had generally higher pH
 - The turbidity in the Alijanchay River was higher than the permitted limit and it was below than the permitted limit in Yukhari Shirvan channel.
 - 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 then the permitted limits.
18. All air quality monitoring results for all determinants and all monitoring stations were below Azeri national standards.

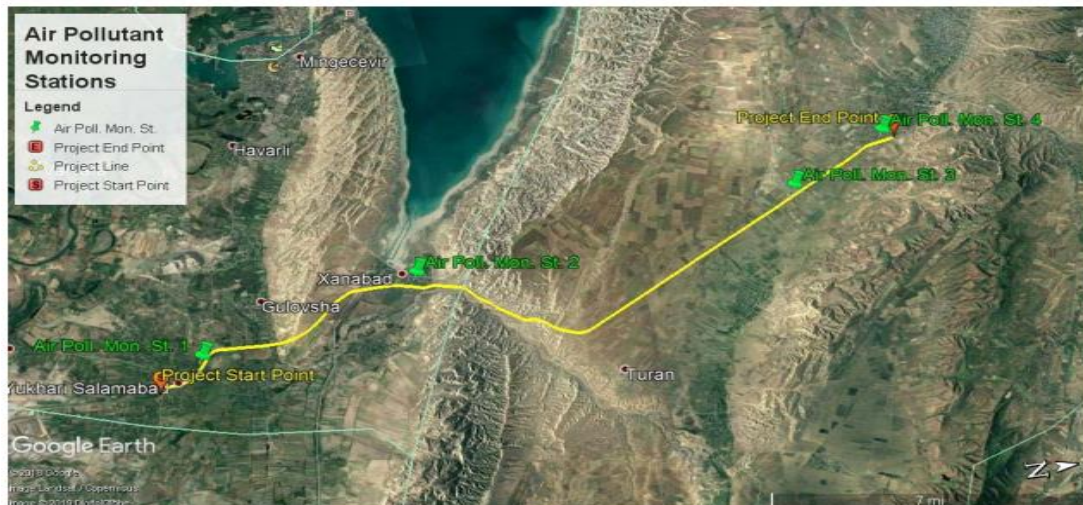


Figure 4. Air Monitoring stations

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

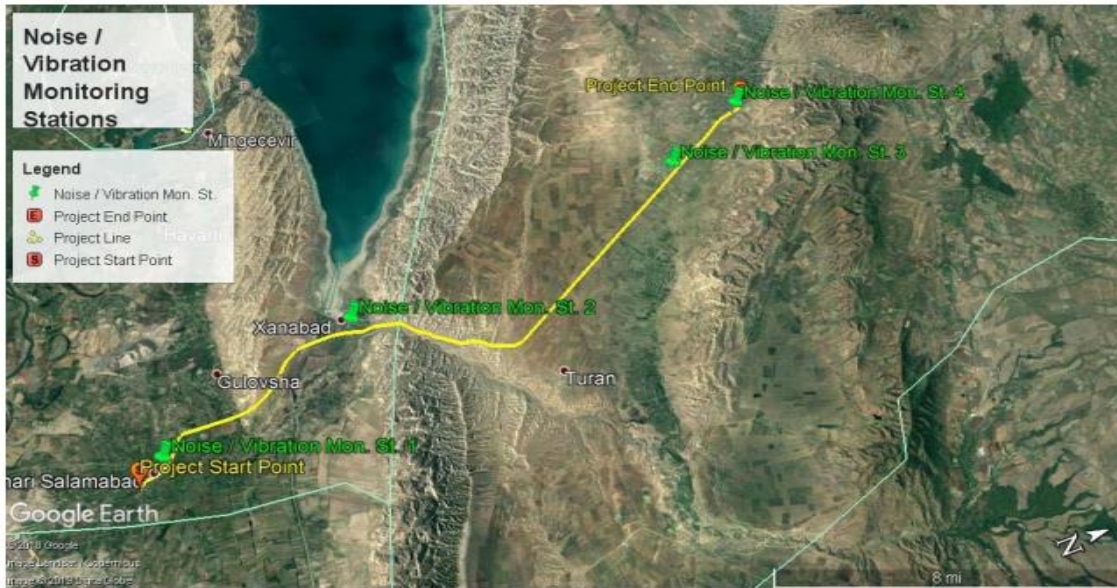


Figure 5.Noise and vibration monitoring stations

C. Action

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



Figure 6.Water monitoring stations

Lot-2

Results

21. 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 9;

Some further observations on the results are provided below:

- Sheki Town, R57 road had generally higher pH
- Turbidity in Sheki Town, R57 road was higher than the permitted limit and it was below than the permitted limit in Yukhari Shirvan channel
- 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 than the permitted limits.

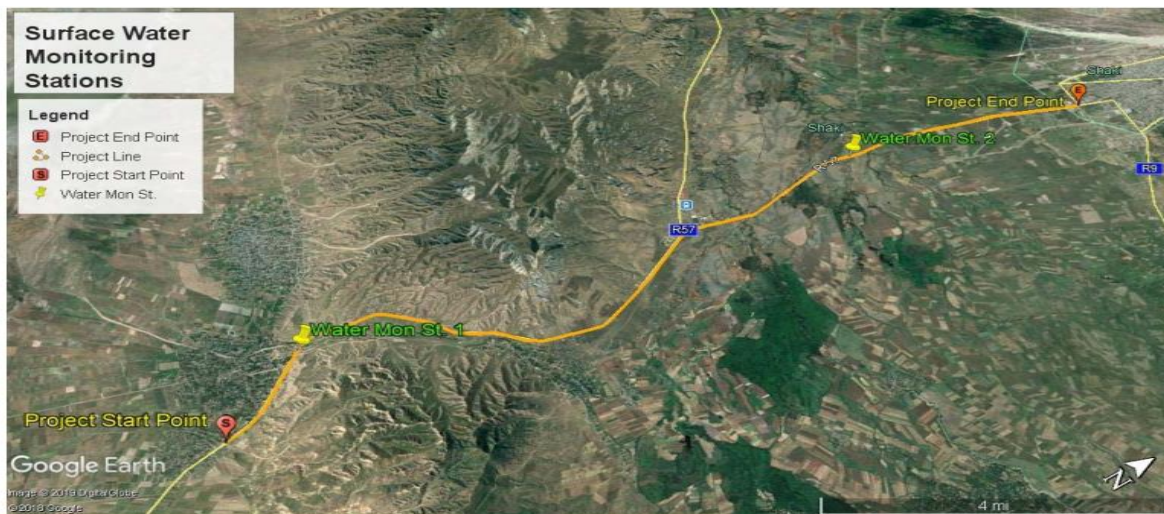


Figure 7. Water Monitoring stations

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

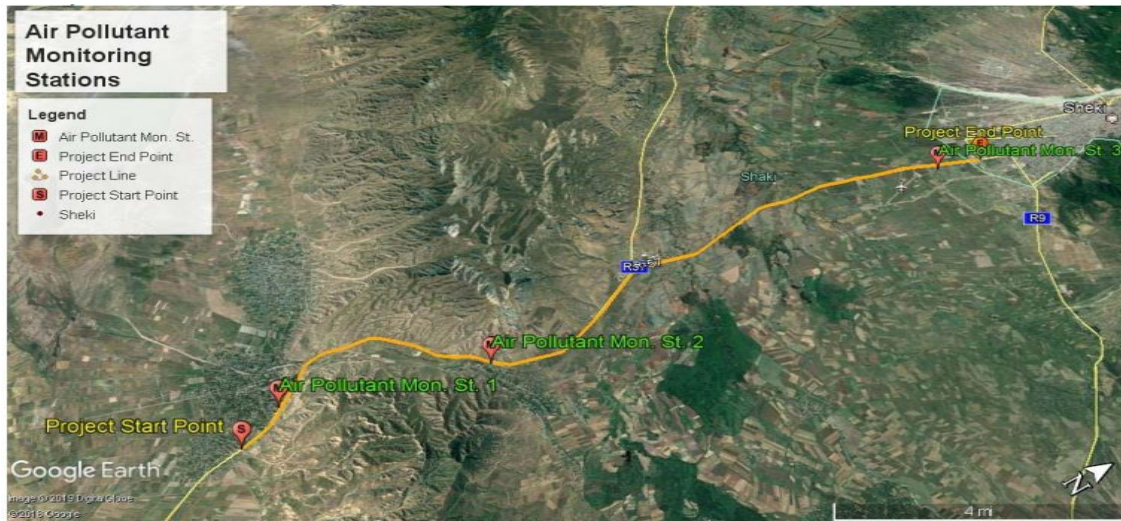


Figure 8. Air monitoring stations

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

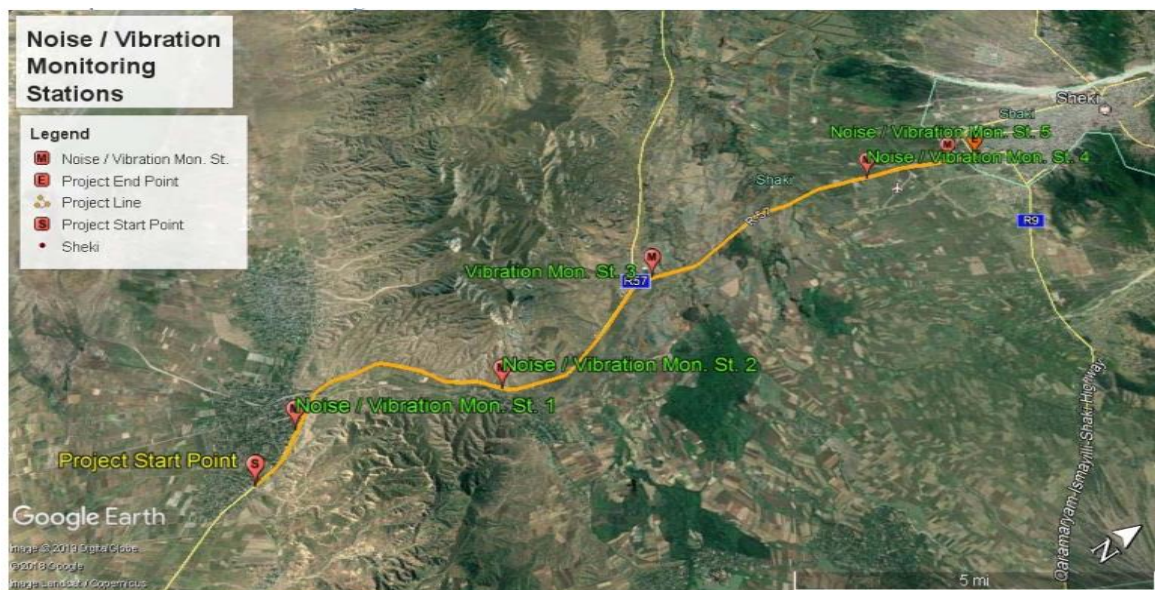


Figure 9.Noise/vibration monitoring stations

Action

24. No action on site is required in response to the monitoring results from the present reporting 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 Azvirt and Lot-2 KOLIN environmental teams there is a two weekly inspection by IRD Engineering and Lot-1 Azvirt and Lot-2 KOLIN 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.

Lot-1 and Lot-2

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.

Lot-1, Lot-2

C. Inspections and Audits

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

33. During the present reporting period The Engineer's International Environmental Specialist Mrs. Carlota Arquiga visited construction sites on the 3rd to the 14th April 2019. Lot-1

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
February, 2019	Site personnel didn't wear breath protective masks	Site personnel should wear breath protective masks	Improved	It is constantly checked the marks
February, 2019	it wasn't taken dust control measures during scarification and milling works of the existing asphalt layer	To take the appropriate dust control measures such as watering the surface of the pavement.	Improved	The consultant keeps under control of watering the surface of pavement
March, 2019	Site personnel didn't use adequate respirators against hazardous and toxic dust	To take the adequate health and safety measures for ongoing works at the site preventing workers from breathing hazardous and toxic dust.	Improved	The contractor tries provide the site personnel with enough respirators
March, 2019	Personnel Protective Equipment (PPE) problems	To provide all workforce with the adequate PPE (personal protective equipment) for the daily work at the site.	Improved	The consultant always keeps the PPE requirement guidelines under control
April, 2019	1. Dust emissions on unpaved sections	The consultant instructed the	Improved	It is constantly checked by the Consultant

	raising by the passing vehicles 2.Loaded trucks uncovered 3.Lack of PPE use 4.Lack of safety barriers	contractor to take the adequate measures for watering the unpaved sections, to keep under control of uncovered load trucks, to provide adequate PPE to the employees, to provide the safety barriers to the required places as soon as possible		
May,2019	1.To stringent the maintenance of works with more frequent leveling and compacting of the surface of the service roads 2.Lack of flagmen 3.Lack of safety signs 4.Dust problem	The consultant instructed the contractor to strengthen the maintenance of works with more frequent leveling and compacting of the surface of the service roads, to provide enough flagmen, to provide enough safety signs to the required places and to spray water on the dusty places appropriately	Improved	It is constantly checked by the Consultant
May,2019	Metal, concrete and debris were observed inattentive at the Construction site	The consultant instructed the contractor to remove the demolished old bridge and culvert debris to a safe disposal area	Improved	It is constantly checked by the Consultant
May,2019	To improve traffic safety conditions in the service roads by installing reinforced concrete barriers for the protection of vehicles where the embankment was higher	The consultant instructed the contractor to install reinforced concrete barriers for the protection of vehicles where the embankment was higher	Improved	It is constantly checked by the Consultant
May,2019	1.Removal of existing demolished pipe culverts 2.Taking the appropriate technical measures during the drilling of the piles of Abutment A1 of Bridge H1 to prevent the soil and muddy water from flowing into the channel	The contractor instructed the contractor to remove all the demolished bridge and to take the appropriate technical measures during the drilling of the piles of Abutment A1 of Bridge H1 to prevent the soil and muddy water from flowing into the channel	Improved	It is constantly checked by the Consultant

May,2019	1.Rutting, heaving and depressions on the service roads 2.Dust problem 3.Lack of safety signs and flagmen	The Consultant instructed the contractor to maintain service roads as per Technical Specification's guidelines, to solve the dust problem appropriately and to provide the road sections with necessary safety signs and flagmen	Improved	It is constantly checked by the Consultant
May,2019	1.To improve traffic safety signs 2.Diversion road maintenance shall be improved 3.Adequate safety signs should be improved at the exit and entrance of diversion roads 4. Flashing lamps/signaling shall be improved for the night traffic. 5. Road signs are getting dirty and less visible and thereby safety problem arises during the night and in bad weather. Hence, continuous maintenance and checking should be carried out. 6. The faded signs should be replaced with the new ones as and where necessary. 7. Arrangement regular safety education and trainings for employees to eliminate accidents and incidents.	The consultant instructed the contractor about improving traffic safety signs, diversion and maintenance, safety signs at the exit and entrance of diversion roads, flashing lamps, signaling for the night traffic, provide regular safety education and trainings.	Improved	It is constantly checked by the Consultant

34. 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.

35. 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.
36. 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 four months, however, a number of easily-avoided non-compliances were still noted during a December audit.
37. 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.
38. The consultant reminded the Contractor while carrying out scarification and milling works of the existing asphalt layer to follow the below-mentioned environmental, health and safety rules strictly via official letter AH-AVT-19-M5- Lot 1-027, Health and Safety Measures in Scarifying and Milling Works in February, 2019
1. The site personnel shall wear breath protective masks
 2. To take the appropriate dust control measures such as watering the surface of the pavement.
39. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 1-038 Reminder about environmental, health and safety conditions in March, 2019.
1. To take the adequate health and safety measures for ongoing works at the site preventing workers from breathing hazardous and toxic dust.
 2. To provide all workforce with the adequate PPE (personal protective equipment) for the daily work at the site.
40. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 1-074 Environmental, health and safety issues in April,2019:
1. Dust emissions on unpaved sections raising by the passing vehicles
 2. Loaded trucks uncovered
 3. Lack of PPE use
 4. Lack of safety barriers
41. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 1-078 Maintenance of service roads in May, 2019.
1. To stringent the maintenance of works with more frequent leveling and compacting of the surface of the service roads
 2. Lack of flagmen
 3. Lack of safety signs
 4. Dust problem
42. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 1-079 Environmental shortcomings at the construction site in May, 2019
1. Metal, concrete and debris were observed inattentive at the Construction site
 2. During the culvert and pipe construction concrete waste were observed during unattended



Figure 10. Metal waste



Figure 11. Concrete waste

43. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5-Lot 1-083 Improvement of service roads in May, 2019

1. To improve traffic safety conditions in the service roads by installing reinforced concrete barriers for the protection of vehicles where the embankment was higher



Figure 12. Need of new physical barrier

44. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5-Lot 1-085 Environmental shortcomings at the site in May, 2019

1. Removal of existing demolished pipe culverts
2. Taking the appropriate technical measures during the drilling of the piles of Abutment A1 of Bridge H1 to prevent the soil and muddy water from flowing into the channel.



Figure 13. Excesses of the old culverts



Figure 14. Mud flew into the water

45. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5-Lot 1-090 Maintenance of service roads in May, 2019

1. Rutting, heaving and depressions on the service roads
2. Dust problem
3. Lack of safety signs and flagmen

46. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5-Lot 1-108 Improvement of Environmental, Health and safety issues in June, 2019

1. To improve traffic safety signs
2. Diversion road maintenance shall be improved
3. Adequate safety signs should be improved at the exit and entrance of diversion roads
4. Flashing lamps/signaling shall be improved for the night traffic.
5. Road signs are getting dirty and less visible and thereby safety problem arises during the night and in bad weather. Hence, continuous maintenance and checking should be carried out.
6. The faded signs should be replaced with the new ones as and where necessary.
7. Arrangement regular safety education and trainings for employees to eliminate accidents and incidents.

Table 4: Instructions to Contractor during the last 4 Months

No	Date	Description of Instruction
1	22/02/2019	AH-AVT-19-M5- Lot 1-027, Health and Safety Measures Health and Safety Measures
2	11/03/2019	AH-AVT-19-M5- Lot 1-038 Reminder about environmental, health and safety conditions
3	24/04/2019	AH-AVT-19-M5- Lot 1-074 Environmental, health and safety issues
4	08/05/2019	AH-AVT-19-M5- Lot 1-078 Maintenance of service roads
5	08/05/2019	AH-AVT-19-M5- Lot 1-079 Environmental shortcomings at the construction site
6	20/05.2019	AH-AVT-19-M5- Lot 1-085 Environmental shortcomings at the site in May, 2019
7	28/05/2019	AH-AVT-19-M5- Lot 1-090 Maintenance of service roads
8	15/06/2019	AH-AVT-19-M5- Lot 1-108 Improvement of Environmental, Health and safety issues

The Contractor, AzVirt, has registered minor deviations from the Environmental Management Plan in the project IEE. These deviations are considered to be in the lowest level of “non-conformity” at a level of “observation” and have been promptly addressed by the CC.

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
April,2019	1.To protect the health of workers 2.To avoid materials from contamination	The contractor should protect the health of workers and should avoid materials from contamination	Improved	It is constantly checked the marks
May,2019	1.To collect the technical water of the Crusher plant properly 2. To take the adequate health and safety measures for ongoing works at the site preventing workers from breathing hazardous and toxic dust. 3.To provide the higher slopes with physical barriers to avoid from accidents 4.To remove the demolished old culverts from the construction site 5.To remove the water from the bounded concrete	The Consultant instructed the contractor about to collect the technical water of the crusher plant properly, to take the adequate health and safety measures for ongoing works at the site preventing workers from breathing hazardous and toxic dust, to provide higher slopes with physical barriers to avoid from accidents, to remove the demolished old culverts and bridge debris from the site	Improved	It is constantly checked the marks

	base of the power generator	to a safe disposal area, to remove the water from the bounded concrete base of the power generator		
June,2019	<p>1. To provide the traffic safety signs as necessary.</p> <p>2.Diversion road maintenance shall be improved</p> <p>3. Adequate safety barriers shall be installed as and where needed. Especially at exit/entry of the diversion roads and where the height of the diversion road is higher.</p> <p>4.Flashing lamps/signaling system shall be improved and increased number of lights and signals to be improved</p> <p>5. Road signs are getting dirty and less visible and thereby safety problem arises during the night and in bad weather. Hence, continuous maintenance and checking should be carried out</p>	The consultant instructed the contractor about to provide the traffic with safety enough and adequate safety signs, to maintain diversion roads properly, to maintain adequate safety barriers where needed, to provide flashing/signaling system for night traffic safety, to clean the dirty road signs regularly.	Improved	It is constantly checked the marks

47. 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.
48. 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.
49. 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 4 months, however, a number of easily-avoided non-compliances were still noted during audit.
50. 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.
51. The consultant reminded the Contractor to follow the below-mentioned environmental, health and safety rules strictly via official letter AH-AVT-19-M5- Lot 2-040, Stockpiles and Landfill in April, 2019

- To protect the health of workers
- To avoid materials from contamination

52. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 2-056 Reminder about Environmental, health and safety shortcomings in May, 2019.

- To collect the technical water of the Crusher plant properly
- To take the adequate health and safety measures for ongoing works at the site preventing workers from breathing hazardous and toxic dust.
- To provide the higher slopes with physical barriers to avoid from accidents
- To remove the demolished old culverts from the construction site
- To remove the water from the bounded concrete base of the power generator.



Figure 15. Unsafe place for generator



Figure 16. Concrete waste

53. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 2-059 Environmental, health and safety report in May, 2019:

- To submit Monthly Environmental, Health and Safety report without delay.

54. The consultant reminded the Contractor via official letter via official letter AH-AVT-19-M5- Lot 2-065 Improvement of Health, safety and Environmental issues in June, 2019:

- To provide the traffic safety signs as necessary.
- Diversion road maintenance shall be improved
- Adequate safety barriers shall be installed as and where needed. Especially at exit/entry of the diversion roads and where the height of the diversion road is higher.
- Flashing lamps/signaling system shall be improved and increased number of lights and signals to be improved
- Road signs are getting dirty and less visible and thereby safety problem arises during the night and in bad weather. Hence, continuous maintenance and checking should be carried out

No	Date	Description of Instruction
1	April, 2019	AH-AVT-19-M5- Lot 2-040 Stockpiles and Landfills
2	May, 2019	AH-AVT-19-M5- Lot 2-056 Environmental, health and safety shortcomings
3		

	May,2019	AH-AVT-19-M5- Lot 2-059 Environmental, health and safety report
4	June,2019	AH-AVT-19-M5- Lot 2-065 Environmental, health and safety issues

- The faded signs should be replaced with the new ones as and where necessary
- To arrange regular safety education and training for employees to eliminate accidents and incidents. The report of such trainings should be submitted to the Engineer.

Table 6: Instructions to Contractor during the last four Months

The Contractor, Kolin A.Ş, has registered minor deviations from the Environmental Management Plan in the project IEE. These deviations are considered to be in the lowest level of “non-conformity” at a level of “observation” and have been promptly addressed by the CC.

Lot-1

E. Consultations and Complaints

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

α. 24th April 2019: Khanabad village.

56. Detailed lists of the participants were provided to Engineer within monthly and quarterly reports. Some examples of meeting photos are provided in Figure 18.

57. 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.

58. Following the presentation, attendees were then given an opportunity to make comments or ask questions. Few questions were asked during the meetings .

59. There are no grievances to date.

The Contractor Kolin 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
Sheki Town	March, 2019	June, 2019	September, 2019	December, 2019	March, 2020	June, 2020
	September, 2020	December, 2020	March, 2021			
Villages f the Districts	March, 2019	June, 2019	September, 2019	December, 2019	March, 2020	June, 2020
	September, 2020	December, 2020	March, 2021			

Figure 17.Public Consultation schedule



Figure 18. Public Consultation photo

Lot-2

Consultations and Complaints

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

α. 23th April 2019: Dahna village.

61. Detailed lists of the participants were provided to Engineer within monthly and quarterly reports. Some examples of meeting photos are provided in Figure 9.

62. 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.

63. Following the presentation, attendees were then given an opportunity to make comments or ask questions.

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

The Contractor Kolin 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
Sheki Town	March, 2019	June, 2019	September, 2019	December, 2019	March,2020	June, 2020
	September, 2020	December, 2020	March, 2021			
Villages of the Districts	March, 2019	June, 2019	September, 2019	December, 2019	March,2020	June, 2020
	September, 2020	December, 2020	March, 2021			

Figure 19.Public Consultation schedule

Table 7. Grievance Redress Mechanism Book.

No	Tranche	Location	Date received	How grievance was received	Complainant	Description of the issues/complaints	Contact details	Notes, undertaken actions	Status
1	Lot-2	Kichik Dahna	14.06.2019	Official Letter	Jabbarov Parvin	During construction works it was damaged to the Complaint's water line and unsuitable material dumped close to his garden	55 663 04 55	The Engineer informed the Contractor about the situation and the unsuitable material were removed and the damage to the water line was fully paid by the Contractor.	Solved

Upgrading of Yevlakh-Zagatala-Georgian Border Road, Lot 2

Public Consultation



Figure 20. Public Consultation photo

Lot-1, Lot-2

F. Emerging Issues

65. 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

66. The work on the road alignment has progressed significantly over the past 4 months the alignment was generally in a compliant status.
67. 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. The Contractor complied the environmental safeguard requirements. ADB and the Engineer provided technical support to the Contractor as needed on environmental management.

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 Monitoring Department of the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan on Environment for the construction of the AzVirt LLC project on reconstruction of Yevlakh-Zagatala-Georgia Border Road (M5), Khaldan – Suchma Section (km 00 + 300 - km 33 + 100) lot 1, monitoring of air, surface water, noise and vibration was approved by the Resolution No. 90, dated July 1, 2004 of the Cabinet of Ministers of the Republic of Azerbaijan in July 04, 2019 and was implemented in accordance with the Regulation on the State Environmental and Natural Resources Monitoring Rules. Measurements were made to study the environmental conditions of those areas, samples were taken and laboratory tests were performed. In the laboratory, the analyses were performed based on the extrusion, calorimetric, conductometric and titrimetric techniques using local standards.

2. Conclusion and National Standards

The air content, surface water content, sound and vibration levels (dB) were measured in the area of Khalddan settlement, Khanabad village, Sheki town, Yevlakh district, located in the construction site, and most of the elements were within the norm.

All results were compared with the following local standards:

- Voice Standards DUEST 17187 (General Standards and Requirements), Presidential Decree 796N of 8 July 2008;
- Maximum Vibration Allowance, DST (General Standards and Requirements), Presidential Decree No. 796 of 8 July 2008;
- Admissible concentrations of toxic elements in the workplace GOST 12.1.005-88, Ministry of Ecology and Natural Resources, 2003;
- Admissible concentrations of toxic elements in surface water, Decision No 1, Committee on Environment and Natural Resources Control 1994.



MINISTRY OF ECOLOGY AND NATURAL
RESOURCES OF THE REPUBLIC OF
AZERBAIJAN

NATIONAL MONITORING DEPARTMENT
ON ENVIRONMENT

Postal code: AZ 1154, Baku city

Heyder Aliyev ave. 10

Tel:(+99412) 440-30-26; Fax:(+99412) 441-51-23

E-mail:

milli.monitoring@mail.ru

To the Director of Azvirt LLC
Elnur Eliyev

« 20 » 08 2019

№ 19/236

Dear Mr. Elnur,

We kindly submit to you the monitoring results carried out at the indicated points based on the contract no.7 dated 24 July 2019.

Attach: 5 sheets

Sincerely,

Director

Ramal Bagirov

Thickness of the pollutant ingredients in the
Atmosphere (mg/m³)

Monitoring points	Ingredients	Amount of the components (Point 1)	Allowable thickness degree
Yevlakh town.Upper Salamabad set.(Km1+700)	PM2.5	0.019	0.025
	PM10	0.038	0.050
Yevlakh town. Khanabad set.(Km 9+800)	PM2.5	0.017	0.025
	PM10	0.039	0.050
Sheki town. Suchma village (Km 28+600)	PM2.5	0.021	0.025
	PM10	0.047	0.050

Voice Levels (dBA)

Monitoring points	Parameters	Measuring results (Point 1)	Allowable thickness level
Yevlakh town.Upper Salamabad set.(Km1+700)	Voice	52.3	70
Yevlakh town. Khanabad set.(Km 9+800)	Voice	53.7	70
Sheki town. Suchma village (Km 28+600)	Voice	56	70

Results of physical-chemical and microbiological
analyses of water samples taken.

Ingredients	Measuring unit	Yevlakh town, Alijanehay river	Yevlakh town, Upper Shirvan canal	YVQH
pH	-	7,7	7,9	6,0-9,0
Electroconductivity	X10 ³ Cm/cm	0,861	0,477	-
Transparency	cm	22	25	>30
Turbidity	mg/l	38	14,1	>30
Solved oxygen	(mg/l,%)	5,7 70,2	6,2 79,0	4-6
Biological consumption of oxygen (OBS5)	mg/l	0,96	0,45	3
Calcium ion, Ca ²⁺	mg/l	71,6	45,2	-
Magnesium ion, Mg ²⁺	mg/l	32,8	14,6	-
Chloride ion, Cl	mg/l	36,3	21,8	350,0
Sulphate ion, 3 CO ₄ ⁻²	mg/l	123,7	73,1	500,0
Bicarbonate ion, HCO ₃ ⁻	mg/l	244,1	140,3	-
Carbonate ion, CO ₃ ⁻²	mg/l	0	0	-
Na ⁺ +C ⁺ ions	mg/l	32,5	23,2	-
Sum of ions, Σ	mg/l	542,8	319,4	<1000
Nitride ion, NO ₂ ⁻	mg/l	0,1	0,6	3,3
Nitrate ion, NO ₃ ⁻	mg/l	1,50	0,47	45,0
Ammonium ion, NH ₄ ⁺	mg/l	0	0	0,5
Bacillus Bacteria Group (BBG)	unit/liter	32 000	298 000	1000
E-Coli	unit/liter	1 800	5 000	1000

Vibration level (dBA)

Monitoring points	Parameters	Measuring results (Point 1)	Allowable thickness level
Yevlakh town.Upper Salamabad set.(Km1+700)	Voice	61	70
Yevlakh town. Khanabad set.(Km 9+800)	Voice	58.2	70
Sheki town. Suchma village (Km 28+600)	Voice	66	70

Lot-2

Table 9. Instrumental Monitoring Results

1. Introduction

National Monitoring Department of the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan on Environment for the construction of the Kolin LLC project on Upgrading of Yevlakh–Zagatala-Georgian Border Road (M5), Section Suchma - Shaki Roundabout, (km 33+100 – 46+120) and Rehabilitation of R-57 Road, Lot 2, monitoring of air, surface water, noise and vibration was approved by the Resolution No. 90, dated July 1, 2004 of the Cabinet of Ministers of the Republic of Azerbaijan in July 04, 2019 and was implemented in accordance with the Regulation on the State Environmental and Natural Resources Monitoring Rules. Measurements were made to study the environmental conditions of those areas, samples were taken and laboratory tests were performed. In the laboratory, the analyses were performed based on the extrusion, calorimetric, conductometric and titrimetric techniques using local standards.

2. Conclusion and National Standards

The air content, surface water content, sound and vibration levels (dB) were measured in the areas of Sheki Town and Suchma and Savxoz village of Sheki town, located in the construction site, and most of the elements were within the norm.

All results were compared with the following local standards:

- Voice Standards DUEST 17187 (General Standards and Requirements), Presidential Decree 796N of 8 July 2008;
- Maximum Vibration Allowance, DST (General Standards and Requirements), Presidential Decree No. 796 of 8 July 2008;
- Admissible concentrations of toxic elements in the workplace GOST 12.1.005-88, Ministry of Ecology and Natural Resources, 2003;
- Admissible concentrations of toxic elements in surface water, Decision No 1, Committee on Environment and Natural Resources Control 1994.



**MINISTRY OF ECOLOGY AND NATURAL
RESOURCES OF THE REPUBLIC OF
AZERBAIJAN**

**NATIONAL MONITORING DEPARTMENT
ON ENVIRONMENT**

Postal code: AZ 1154, Baku city

Heyder Aliyev ave. 10

Tel:(+99412) 440-30-26; Fax:(+99412) 441-51-23

E-mail:

milli.monitoring@mail.ru

**To the Manager of the representative office of the
"Kolin Construction Tourism Industry and Trade"
anonymous company in republic of Azerbaijan-
Enis Bukay**

« 20 » 08 2019

№ [19/235](#)

Dear Mr. Elnur,

We kindly submit to you the monitoring results carried out at the indicated points based on the contract no.8 dated 24 July 2019.

Attach: 5 sheets

Thickness of the pollutant ingredients in the
Atmosphere (mg/m³)

Monitoring points	Ingredients	Amount of the components (Point 1)	Allowable thickness degree
Sheki town. Suchma village, M5 (Km1+100)	PM2.5	0.33	0.025
	PM10	0.047	0.050
Sheki town.Sovxoz village M5 (Km 7+750)	PM2.5	0.023	0.025
	PM10	0.045	0.050
Sheki town. R57 Road (Km 24+000)	PM2.5	0.018	0.025
	PM10	0.042	0.050

Voice Levels (dBA)

Monitoring points	Parameters	Measuring results (Point 1)	Allowable thickness level
Sheki town. Suchma village, M5 (Km1+100)	Voice	55.2	70
Sheki town.Sovxoz village M5 (Km 7+750)	Voice	56.9	70
Sheki town. R57 Road (Km 24+000)	Voice	52.8	70

Vibration level (dBA)

Monitoring points	Parameters	Measuring results (Point 1)	Allowable thickness level
Sheki town.Suchma village, M5 (Km1+100)	Voice	66	70
Sheki town. Sovxoz village M5 (Km 7+750)	Voice	57.5	70
Sheki town. R57 Road (Km 24+000)	Voice	59,8	70

Results of physical-chemical and microbiological analyses of water samples taken.

Ingredients	Measuring unit	Sheki town. R57 Road	YVQH
pH	-	7,8	6,0-9,0
Electroconductivity	X10 ³ Cm/cm	0,517	-
Transparency	cm	16	>30
Turbidity	mg/l	70,5	>30
Solved oxygen	(mg/l,%)	5,0 62,6	4-6
Biological consumption of oxygen (OBS5)	mg/l	0,84	3
Calcium ion, Ca ²⁺	mg/l	57,3	-
Magnesium ion, Mg ²⁺	mg/l	24,3	-
Chloride ion, Cl	mg/l	16,3	350,0
Sulphate ion, 3 CO ₄ ⁻²	mg/l	69,9	500,0
Bicarbonate ion, HCO ₃ ⁻	mg/l	231,9	-
Carbonate ion, CO ₃ ⁻²	mg/l	0	-
Na ⁺ +C ⁺ ions	mg/l	20,5	-
Sum of ions, Σ	mg/l	421,1	<1000
Nitride ion, NO ₂ ⁻	mg/l	0,02	3,3
Nitrate ion, NO ₃ ⁻	mg/l	0,71	45,0
Ammonium ion, NH ₄ ⁺	mg/l	0	0,5
Bacillus Bacteria Group (BBG)	unit/liter	34 000	1000
E-Coli	unit/liter	2 200	1000

Figure 21. Lot-1 - Progress photos during the reported period



Special bounded area provided for oil production



Special bounded area provided for oil and chemical production



Special bounded area provided for oil and chemical production



Turyanchay Borrow pit



Information boards provided at project start and end points



Alijanchay Borrow pit, site journey with Engineer's representatives



Traffic Safety Measures Provided at all Site



All workers use PPE



Pavement works started at site



Traffic Safety Measures Provided at all Site



Traffic Safety Measures Provided at all Site



Traffic Safety Measures Provided at all Site



Contractor provided water tankers against dust emissions



Contractors' office



Campsite



Construction site and detour roads provided with water spreading and traffic safety signs



Pavement works started between km 9 and km 6, Environmental and safety measures provided



Pavement works started between km 9 and km 6, Environmental and safety measures provided



Traffic safety measures provided at all site



Traffic safety measures provided at all site



Construction site



Pavement works in progress



Maintenance and watering of Service / diversion roads provided



Maintenance and watering of Service / diversion roads provided



Traffic safety measures are provided in all areas



Traffic safety measures are provided in all areas



Construction site, pavement works



Safety measures provided at bridge construction site



Maintenance of access roads and anti-dust sprinkler and road safety measures are provided



Construction site, scarifying of existing asphalt



Monitoring of air content at designated locations has been provided



Monitoring of air content at designated locations has been provided



Monitoring of vibration level at designated locations has been provided



Monitoring of vibration level at designated locations has been provided



Monitoring of vibration noise at designated locations has been provided



Environmental monitoring was provided at all project locations

Figure 22. Lot-2 - Progress photos during the reported period



Contractors` Office



Engineers` Office



Canteen



Canteen for Engineers



Canteen for workers



Dormitory



Sewage system provided at camp site



Warehouse provided for oil and chemical productions



Sewage system provided at camp site



Construction of Auto service in progress



Construction of Auto service in progress



Safety measures provided at entire camp site



Traffic warning signs provided at the entrance of construction site



Traffic safety signs provided at construction site, km 1, bridge construction site



Safety fence provided at the edge of the slope



Safety fence and concrete barriers provided at the edge of the slope which the height of the slope more than 3m



Traffic safety signs provided at construction site



Traffic safety signs provided at construction site, bridge construction



Water spreading provided against Dust emissions



Water spreading provided against Dust emissions



Protection of Ecology



Maintenance of service roads provided by Contractor



Watering of service road against dust emissions provided



Provide road signs for service road