

Environmental Monitoring Report

Project Number: 52286-001
Semestral Report: January–June 2021
February 2022

Kazakhstan: Central Asia Regional Economic Cooperation Corridors 1 and 6 Connector Road (Aktobe–Kandyagash) Reconstruction Project

Prepared by the PMC JSC "NC "KazAvtoZhol" for the JSC "NC "KazAvtoZhol" and the Asian Development Bank.

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Environmental Monitoring Report

Project No.: 3829-KAZ
Reporting Period: January-June 2021

REPUBLIC OF KAZAKHSTAN: CAREC CORRIDORS 1 AND 6 CONNECTOR “AKTOBE-KANDYAGASH” ROAD RECONSTRUCTION PROJECT

Funded by ASIAN DEVELOPMENT BANK

Prepared by by PMC JSC “NC “KazAvtoZhol” with support of DONGSUNG ENGINEERING CJ., LTD / ZS ENGINEERING Construction Supervision Consultant (Seoul, Korea) for the JSC “NC “KazAvtoZhol” and the Asian Development Bank

Approved by: PMC JSC “NC “KazAvtoZhol” – Chubutkina Olesya

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Signature:



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CONTENT

I INTRODUCTION	2
1.1 Preamble	2
1.2 Basic information	2
II PROJECT DESCRIPTION AND CURRENT ACTIVITIES	2
2.1 Description of the Project	2
2.2 Main characteristics of the project	4
2.3 Project contracts and management	4
2.4 Project Activities During the Current Reporting Period	8
III. ENVIRONMENTAL SAFEGUARD ACTIVITIES	17
3.1 General Description of Environmental Safeguard Activities	17
3.2. Engineer services	18
3.3 On-site audit (site visit)	18
3.4 Problem tracking (Based on non-compliance notifications)	19
3.5 Trends (general directions)	19
3.6 Unforeseen environmental impacts or risks	19
IV. ENVIRONMENTAL MONITORING RESULTS	20
4.1 General information about the monitoring carried out during the current period	20
4.2 Air quality	21
4.3 Water quality	28
4.4 Noise and vibration	32
4.5 Monitoring of flora and fauna	33
4.6 Use of material resources	33
4.7 Waste management	34
4.8 Borrow pits and its management	35
4.9 Health and safety	39
4.10 Trainings	40
4.11 GRM functioning	40
V SEMP (SSEMP) functioning	43
5.1 SEMP (SSEMP) review	43
5.2 Environmental permits/documentation/licenses	43
VI BEST PRACTICES AND OPPORTUNITIES FOR THEIR IMPROVEMENT	44
6.1 Best practices (good practices)	44
6.2 Opportunity for improvement	44
VII SUMMARY AND RECOMMENDATIONS	45
7.1 Conclusions	45
7.2 Recommendations	45
Annexes	47

ABBREVIATIONS

ADB	Asian Development Bank
ALV	Admissible Limit Value
CoR	Committee of Roads
CSC	Construction Supervision Consultant
COVID-19	Coronaviral infection 2019-nCoV
CAREC	Central Asian Regional Economic Cooperation
ECP	Environmental Control Programme
EMoP	Environmental monitoring plan
EMP	Environmental Management Plan
IEE	Initial Environmental examination
KAZh	“NC “KazAvtoZhol” JSC
MPL	Maximum Permissible Level
MIID	Ministry of Industry and Infrastructure Development
PMC	Project Manager Consultant
PEM	Production Ecology Monitoring (carried out by an accredited laboratory)
RK	Republic of Kazakhstan
RSE	Republic State Enterprise
SHS	Sanitary-Hygienic Standard
SSEMP	Site-Specific Environmental Management Plan
RSE	Republic State Enterprise
SPZ	Sanitary Protection Zone

I. INTRODUCTION

1.1 Preamble

1. This report is a semi-annual environmental monitoring review for the reconstruction project of Aktobe-Kandyagash road, connecting CAREC Corridors 1 and 6 (Road section km, Lots 1-2). The report is the first semi-annual for 2021.

1.2 Basic information

2. This Project is part of the 460 km Aktobe-Kandyagash-Makat road project that connects the oil and mineral-rich regions of Aktobe and Atyrau, serving a population of 1.7 million people. Due to wear and tear, road surfaces, bridges and culverts (which have been designed for lower axle loads) struggle to cope with the rapidly growing and heavy traffic loads from oil wells and refineries in the region. Traffic between Aktobe and Atyrau is increasingly being redirected to the northern route Aktobe - Oral - Atyrau, since the travel time remains almost unchanged, despite the additional 500-kilometer detour. Poor road connectivity has also become a key social problem as it has contributed to rising income and wealth inequality between rural and urban areas in western Kazakhstan.
3. The Aktobe-Makat line is a connecting road that links CAREC corridors 1b and 6a, two major trade routes, with the Russian Federation and the European Union, Kazakhstan's main trading partners. This integration of the two international corridors will significantly reduce transport costs, increase travel speeds along these corridors, and contribute to trade facilitation in Kazakhstan. In 2016, ADB approved financing for 299 km of the Kandyagash - Makat section. In 2018, the Government requested ADB to finance an additional 89 km section connecting Aktobe and Kandyagash, with a completion date of 2024.
4. The Government of Kazakhstan has asked ADB to provide financing for the development of Western Kazakhstan through road reconstruction and extension on the existing road linking Aktobe and Kandyagash from 2-lane to 4-lane to achieve the following goals:
 - Reduction of rapidly growing and intensive traffic loads;
 - Reducing travel time;
 - Provide wider access to markets and employment opportunities;
 - Increase in higher economic opportunities, etc.

II. DESCRIPTION OF THE PROJECT AND CURRENT ACTIVITIES

2.1 Description of the project

5. The Aktobe-Kandyagash-Makat road is a two-lane road of republican significance and was built in 1970-1980. The length of the reconstructed section "Aktobe-Kandyagash" is 89 km, mainly the road has III / IV category, and passes through the territory of the Aktobe region. A complete reconstruction of the road surface with strengthening of its structure will reduce travel time on the road, fuel consumption of vehicles and the cost of operating vehicles on the way, and will also contribute to an increase in transport links and the economic development of the region. The road will be reconstructed according to the standards for the II category in accordance with the national standard of the Republic of Kazakhstan.
6. The project provides for the Reconstruction of an 89-kilometer section of the A-27 republican road between Aktobe and Kandyagash (Figure 1 Map of the location of the project road). The

project consists of two sections, separately for different Contracts. The project began on the southern side of the outskirts of the Aktobe region. The road goes south until it reaches Kandyagash about 100 km south of Aktobe. The project will be limited to the right of way, with the exception of the two proposed detour roads in Alga (km 35–39) and Kandyagash (km 88–104).



Fig 1. Location of the designed road (red lines)

7. The project is financed with funds from the Asian Development Bank (ADB).
8. The proposed project includes the reconstruction of a section of km 11-100 of the Aktobe-Kandyagash road. The reconstructed section, 89 km long, was divided into 2 lots, each of which implies a separate contract for construction work. The road section is divided into 2 lots:
 - Lot 1 - Km 11-52. General Contractor JV "SineMidasStroy LLP-Todini Costruzioni Generali S. p. A."
 - Lot 2 - Km 52-100. General contractor JV Akzhol Kurylys LLP - AzVirt LLC - Assana Dorstroy LLP
9. The project began on the southern side of the outskirts of the Aktobe region. The road goes south until it reaches Kandyagash about 100 km south of Aktobe. The project will be limited to the right of way, with the exception of two proposed detour roads in Alga (km 35-39) and Kandyagash (km 88-104).
10. The construction agreement under the contract for the performance of work Lot 1 and Lot 2 was concluded on November 24, 2020 between NC KazAvtoZhol JSC and General Contractors

11. In accordance with clause 8.1 of the GCC “Commencement of Works”, the notice of the work commencement date was issued by the engineer by letter ref.No.0034-AKKA-2021 dated February 26, 2021 for both Contracts.

12. The contractual deadline for the completion of the project is:

- Lot 1 - 930 days. Contract Completion Date - September 17, 2023
- Lot 2 - 990 days. Contract Completion Date - November 16, 2023
- The defect liability period after the date of the completion of construction is 730 days.

2.2 Main characteristics of the project

13. The characteristics of the project road are presented in *Table 1* below.

Table 1. Project characteristics

Road Components	Lot-1	Lot-2
Contractor Company Name	Seni Medas Sroy / TODINI	AK ZHOL / AZVIRT /ASSANA
Location	km 11-52	km 52-100
Length	44,3 km	33,5 / 15,88 km
Project Road Category	Ib	Ib and II
Pavement Method	SMA-20	SMA-20
Traffic Lanes (up/down)	2/2	2/2 и 1/1
Lane Width <ul style="list-style-type: none"> ● Outer ● Inner ● Shoulders 	3.75 Meters 3.75 Meters 3.75 Meters	3.75 Meters 3.75 Meters 3.75 Meters
Structures: Overpass RMD	3 1	1 1
Bridges	9	5
Other Structures: <ul style="list-style-type: none"> ● Pipe Culverts ● Box Culverts ● Rest areas ● Bus shelters 	24 11 5 10	22 9 3 8
Design Standards: <ul style="list-style-type: none"> ● Design Speed ● Width of Right of Way 	120 m/h) 70 METERS	

2.3 Project contracts and management

14. JSC NC KazAvtoZhol (KAZh) provides consulting services for project management in accordance with the terms of reference acceptable to ADB and applicable under the laws of the Republic of Kazakhstan. KAZh remains fully staffed throughout the implementation of the

Project. The responsible officer for environmental protection and protective measures conducts audits, site inspections, interacts with the protective measures specialist of the CSC in order to effectively manage the project in terms of implementing environmental protection plans.

15. The regional representative from the Employer in the field is the Aktobe Branch of JSC NC KazAvtoZhol.
16. The contract for lot 1 (km 11-52) was concluded between JSC "NC "KazAvtoZhol" and JV "SineMidasStroy LLP-Todini Costruzioni Generali S. p. A.", and for lot 2 (52-100) - with JV Akzhol Kurylys LLP - AzVirt LLC - LLP "Assana Dorstroy".
17. Construction Supervision Consultant (CSC or Engineer) - DONGSUNG ENGINEERING CJ., LTD / ZS ENGINEERING. The contract with CSC was signed by KAJ on October 30, 2020.
18. The list of the main organizations included in the project and related to protective measures for environmental safeguards is presented below in Table 2.

Table 2. List of organizations and contacts of specialists related to protective measures for Environmental Safeguard of the Project

Organization name	Representative	Contact
ADB Project department / group	Armine Yedigaryan, Country Environmental Focal person	ayaedigaryan@adb.org
ADB Resident mission in RK	Malika Babadzhanova, ADB RETA Environmental consultant	mbabadjanova1.consultant@adb.org
Aktobe Branch of JSC "NC "KazAvtoZhol"	Makhambetov Marat Branch Director	Aktobe, Maresyev st, 89 office number 301 +7 701 566 31 44 aktobekrti@mail.ru
PMC JSC "NC "KazAvtoZhol"	Chubutkina Olessya Environmental and Social safeguards consultant	Almaty, +7 747 450 63 09, olessya.chubutkina@gmail.com
CSC DONGSUNG ENGINEERING C., LTD / ZS ENGINEERING LLP	Tastanova G.E. National Environmental Safeguard Specialist	+ 7 777 502 30 58 dsaktobe21@mail.ru
JV "SineMidasStroy LLP- Todini Costruzioni Generali S. p. A.) for lot 1	Ussina Gulnur Environmental specialist	+ 7 701 485 95 80 g.usina@sinemidas.com
AK ZHOL / AZVIRT / ASSANA for lot 2	Adil Erenkov Environmental specialist	+7 705 474 6976 adil.erenkov@mail.ru

19. The figure below shows an organigram of interaction between structures for the Project.
20. Summary of civil works contracts and works' progress is summarized in Table 3 below. All awarded contracts included EMPs cleared by ADB and any conditions of applicable national IEE clearance.

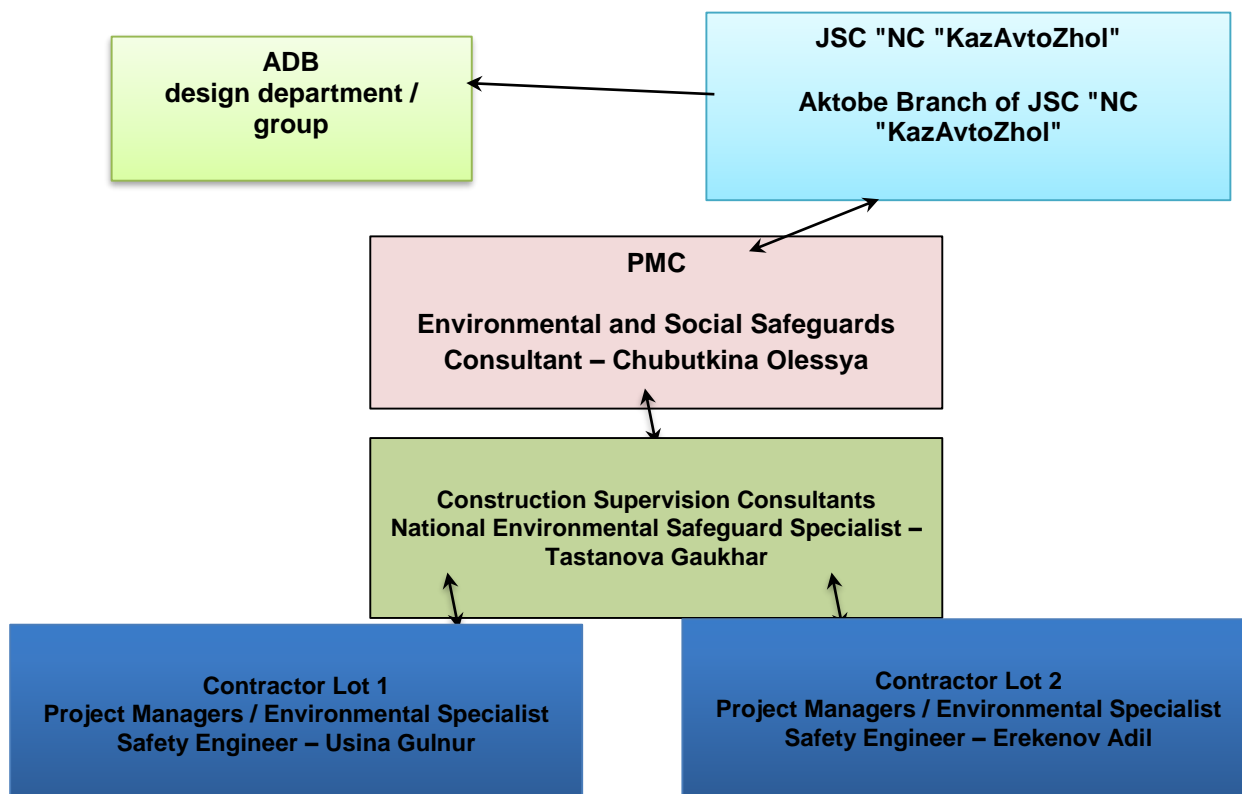


Figure 2. Environmental management for the project

Table 3: Summary of Civil Works Contracts and Works' Progress

Package	Scope	Contractor	Signed contract (dates)	Approval Date			Environmental personnel		Civil Work		(%) Progress as of	
				SEMP	COVID-19 HSMP	ERP	Environment al officer	Health and Safety officer	Start	End	31 Dec 2020	30 Jun 2021
Lot 1 AKRP/CW /LCB-01/Lot-01	Reconstruction of the section km 11-52 (44.3 km)	JV "SineMidasStroy LLP-Todini Costruzioni Generali S. p. A.) for lot 1	24.11.2020	April, 2021	03.05.2021	03.05.2021	Ussina Gulnur	Nugmanov A., HSE engineer	Q1.2021	Q4 2021	0%	1%
Lot 2 AKRP/CW /LCB-01/Lot-02	Reconstruction of the section km 52-100 (49.4 km)	JV Akzhol Kurylys LLP - AzVirt LLC - Assana Dorstroy LLP	24.11.2020	21.04.2021	01.04.2021	01.04.2021	Adil Erekenov	Gorbulko S., head if the site	Q12021	Q42021	0%	2,29%

Note. The month / year in brackets is the planned schedule.

COVID-19 HSMP = COVID-19 Health and Safety Management Plan, ERP = Emergency response plan, SEMP = site-specific environmental management plan

2.4. Project Activities During the Current Reporting Period

Lot 1

21. During the reporting period, the following types of work were performed on the Lot 1 section: Reinforced concrete products were prepared: links for culverts ZKP 6.200 = 256 pcs, ZKP 2.200 = 10 pcs, Foundation slab No. 43 = 30 pcs. Handed-over the geodithic base to the Engineer, Earthworks with a volume of 56.51 thousand m³.

22. Works on the top-soil removal in the areas:

- km 15.1 – km 18.4 = 3,300 m, right side;
- km 19.15 – km 21 = 1,850 m, right side;
- km 29.5 - km 37 = 6,500 m, right side;
- km 36.1 – km 38.3 = 1,200 m, right side;
- km 43.5 - km 44 = 500 m, right side;
- km 50.4 – km 51.3 = 900 m, right side;
- km 51.4 – km 55.3 = 3,900 m, right side.
- km 34.5 - km 37 = 2,500 m, left side;
- km 37.1 – km 28.4 = 1,200 m, left side;
- km 43.5 – km 44= 500 m left side;
- km 53.6 – km 54.5 = 900 m left side.

Total: 23 250 m on the right and left sides.

23. Completed work on the preparation of the subgrade base at the places where the road widening and the existing pavement:

- km 15.1 – km 18.4 = 3,300 m, right side;
- km 19.15 – km 28.7 = 1,550 m, right side;
- km 31.6 - km 37 = 5400 m, right side;
- km 37.1 - km 38 = 900 m, right side;
- km 43.7 - km 44 = 300 m, right side;
- km 50.4 – km 52.9 = 2550 m, right side;
- km 34.5 - km 37 = 2500 m, left side;
- km 37.1– km 38 = 900 m, left side;
- km 43.7 - km 44 = 300 m, left side;
- km 53.6 - km 44.5 = 900 m, left side.

Total: 18 600 m on the right and left sides.

24. Completed work on filling the roadbed in the following areas:

- km 15.15 – km 18.4 = 3,250 m, right side, 26,366 m³
- km 19.15 – km 21 = 1,850 m, right side, 13,275 m³
- km 50.4 – km 52.95 = 2,550 m, right side, 16,873 m³

25. Excavation work performed (development of a ditch):

- km 15.14– km 15.34 = 200 m, right side 2,706 m³
- km 15.54 – km 15.8 = 260 m, right side 2,977 m³
- km 15.92 – km 18 = 880 m, right side 26,941 m³
- km 18 – km 18.5 = 500 m, right side 7,620 m³

26. Table 4 presents data on the status of construction work for the reporting period Lot 1
27. Permission for temporary use of land for the production base was obtained. Permission to use the railway dead-end has been received, work is underway to equip the dead-end for the acceptance of inert material.
28. Work is underway to formalize borrow pits, geological exploration and topographic survey of borrow pits have been carried out. A report on the protection of reserves is being generated at ZapKaznedra.
29. During the reporting period, 123 people work on Lot 1 according to their status as of June 30. Personnel mobilization by profession is presented in Table 5.
30. Equipment and premises are being mobilized on the territory of the production base. Equipment and machinery mobilization is presented in Table 6.

Table 4. Status of construction work for the reporting period for Lot 1

No	Work activities	Units	Total	Performed since the beginning	Plan for 2021	Performed in 2021	Completed during the reporting period
1	Earth work	ths m ³	4 572	56.51	1 345	56.51	56.51
2	Construction of an additional layer of cement-reinforced soil with a stabilizing additive	km	44.305	0	28	0	0
3	Construction of the base bottom layer of crushed stone-sand mixture	km	44.305	0	28	0	0
4	Construction of the base upper layer of hot porous coarse-graded a/c mixture	km	44.305	0	28	0	0
5	construction of the pavement lower layer of hot porous coarse-graded a/c mixture	km	44.305	0	28	0	0

6	Construction of the pavement top layer of polymer-crushed stone-mastic asphalt concrete SMA-20	km	44.305	0	0	0	0
7	Culverts d-1.5m	pcs	7	0	2	0	0
8	Culverts d-2x1.5m	pcs	5	0	2	0	0
9	Culverts d-3x1.5m	pcs	3	0	1	0	0
10	Culverts 2.0x2.0m	pcs	2	0	0	0	0
11	Culverts 2.5x2.0m	pcs	2	0	2	0	0
12	Culverts 4.0x2.5m	pcs	7	0	2	0	0
12	Culverts on junctions d-0.5m	pcs	9	0	0	0	0
13	Bridges and overpasses	pcs	10	0	4	0	0
14	Small bridge for the passage of agricultural machinery	pcs	2	0	0	0	0

Table 5. Mobilization of personnel

№	Position	Quantity on plan for 2021	Fact		
			Sine Midas Stroy LLP		
			foreigners	citizens of Kazakhstan from other regions	local
1	Project Manager	1	1	-	-
2	Section fore master	3	-	1	1
3	CMP	2	1	1	2
5	Foreman	4	1	2	1
6	Master	4	1	-	4
7	Artificial Engineer	1	-	1	-
8	Chief of Asph.plant	1	-	-	-
9	Chief of Soil-mix.plant	-	-	-	-
10	Head of Laboratory	1	-	-	1

11	Laboratory assistants	6	-	-	3
12	Head of Survey Department	1	1	-	-
13	Surveying engineer	2	-	2	1
14	Surveyor	5	-	-	4
15	Surveyor assistant	8	-	-	-
16	Geomatics engineer	1	1	-	-
17	Road safety officer	1	-	-	-
18	OHS officer	1	-	-	1
19	Environmental	1	-	-	-
20	Mechanic	1	1	-	-
21	Operator	62	-	4	26
22	Dump track operator	75	-	10	3
23	Passenger car driver	8	-	1	19
24	Paramedic	1	-	-	-
25	Others	20	-	2	26
	SUBTOTAL		7	24	92
	TOTAL	210	123		

Table 6. Mobilization of equipment

№	Item	Quantity on plan for 2021	Fact		
			Sine Midas Stroy LLP		
			Contractor's	Subcontractor	Rented
1	Asphalt plant (240t/hour)	1	-	-	-
2	Soil-mixing plant	-	-	-	-
3	Asphalt paver	3	-	-	-
4	Distributor	1	-	-	-
5	Excavator	6	2	4	-
6	Crane	2	-	1	2
7	Drill ability pile machine	1	-	-	1
8	Pile-driving machine	1	-	-	-
9	Loader	6	-	4	-
10	Doser	3	2	7	-
11	Water sprinkler	8	-	4	-
12	Grader	3	-	6	-

13	Dump car	75	-	10	3
14	Handling unit	1	-	-	-
15	Mixer	-	-	-	-
16	Low-boy trailer	4	-	2	-
17	Compactor	10	1	4	-
18	Milling machine	1	-	-	-
19	Recycler	1	-	-	-
20	Fuel tanker	1	-	3	-
21	Passenger cars	8	3	14	3
22	Other machinery	15	-	4	3
23	Railway dead-end	1	-	-	-
TOTAL		152	83		

Table 7. Materials delivery

№	Item	Units	Total needs	Needs 2021 for	Performed since beginning
1	Crushed stone	ths.m3	1 380,00	254,70	0,00
2	SGM	ths.m3	105,688	40,00	0,00
3	Precast concrete (bridges and culverts)	ths.m3	10,00	5,7	0,51
4	Cement	ths. tn.	26,200	6,9	0,00
5	Bitumen	ths. tn.	25,711	5,0	0,00

Lot 2

31. On the Lot 2 section, work is being carried out to thicken and coordinate benchmarks, and topo-survey with engineering surveys. Procurement of materials is in progress. The total amount of crushed stone is 193.876 thousand tons, at the same time it is transported to the warehouse of RCM No. 1, 2, 3, 4, 5. The incoming control of crushed stone is carried out daily. Work on top-soil removal is underway, the subgrade base is being prepared, and the filling of soil 1 and 2 layers has also begun. At the same time, the top-soil removal on borrow pits No. 3 and No. 4 is in progress. The work on the construction of the base from the C4 on PK 15 - PK 79 has been completed, the installation of portal blocks ST-12 is underway.
32. An agreement was concluded for the lease of railway dead ends for unloading aggregate materials and 2 sets of dump cars were rented:
- Dead end -1. Alga city 42km
 - Dead end -2. Tamdy vill. 52km
 - Dead end -3. Kandyagash city 100 km.

33. An existing road is being repaired. Works were carried out to remove the PRS from the slopes and reserves of the right side (widening) from km 52 to km 74.5.
34. Dismantling work on the bridge across the Tabantal River, preparatory work (layout of the axis of the pile field) was carried out.
35. The preparation of the foundation of the subgrade from km 52 to km 72.6 has been completed.
36. The construction of a bypass road at km 55, a bridge over the Tabantal River was completed; the construction of the bypass road at km 60 was completed, the construction of the bypass road at km 58 was completed, the construction of the bypass road at km 62 was completed.
37. At km 62, work on the dismantling of existing. pipes, digging a pit for the pipe body and heads, a device for preparing crushed stone for heads, installation of heads and slope walls, a device for preparing crushed stone for a pipe body. Formwork is being installed under the body of the pipe for monolithic concrete foundation.
38. Production permit was obtained from the State Agency "Management of Industrial and Innovative Development of the Aktobe Region.
39. The following machinery is involved in the carrying-away of materials: dump trucks - 6 units; loader - 2 units, involved in unloading wagons - excavators - 2 units; bulldozer - 1 unit. For the maintenance of the existing road involved: Motor grader - 1 pc., Loader - 1 pc., Dump truck - 2 pcs., MTZ-80 tractor - 1 pc., Niva - 1 pc., Gazelle - 1 pc.

Table 8. Key project indicators

No	Work activities	Units	Total	Performed since the beginning	Plan for 2021	Performed in 2021
1	Earth work	ths m3	3144.788	327.509	1497.6	795.979
2	Construction of an additional layer of cement-reinforced soil with a stabilizing additive	km	51.757	0	22.35 (право)	3
3	Construction of the base bottom layer of crushed stone-sand mixture	km	51.757	0	22.35 (право)	2
4	Construction of the base upper layer of hot porous coarse-graded a/c mixture	km	51.757	0	22.35 (право)	0
5	construction of the pavement lower layer of hot porous coarse-graded a/c mixture	km	51.757	0	22.35 (право)	0
6	Construction of the pavement top layer of polymer-crushed stone-mastic asphalt concrete SMA-20	km	51.757	0	0	0
7	Culverts d-1.5m	pcs	12	2	12	5
8	Culverts d-2x1.5m	pcs	3	0	3	1
9	Culverts d-3x1.5m	pcs	6	0	6	0

10	Culverts 2.5x2.0m	pcs	2	0	2	0
11	Culverts 4.0x2.5m	pcs	7	0	7	0
12	Culverts 2x(2.5x2.0)m	pcs	1	0	1	0
13	Bridge Batpakty river	pcs	1	0	1	0
14	Bridge Talasbai	pcs	1	0	1	0
15	Bridge Tabantal	pcs	1	0	1	0.2
16	Overpass	pcs	1	0	1	0.3
17	Small bridge for the passage of agricultural machinery	pcs	2	0	2	0

Table 9: Mobilization of equipment and machinery

№	Item	Quantity on plan for 2021	Fact	
			JV "AkzholKurylys-AzVirt-AssanaDorStroy"	
			Contractor's	Rented
1	Asphalt plant (240t/hour)	2	1	
2	Soil-mixing plant	-	-	
3	Asphalt paver	2	2	
4	Distributor	1	1	
5	Excavator	8	8	11
6	Crane	2	2	5
7	Pile-driving machine	-	-	1
8	Loader	8	8	9
9	Dozer	4	4	7
10	Water sprinkler	18	18	6
11	Grader	8	8	5
12	Dump car	90	90	63
13	Handling unit	1	1	-
14	Mixer	-	-	
15	Low-boy trailer	4	4	1
16	Compactor	24	24	9
17	Milling machine	1	1	-
18	Recycler	1	1	-

19	Fuel tanker	1	1	3
20	Passenger cars	10	10	10
21	Other machinery	19	19	19
22	MPRM vehicle		3	
23	Water tank		1	
24	Trailers		21	
25	Railway dead-end	2	2	
	TOTAL	206	230	149

Table 10: Personnel Mobilization

№	Position	Quantity according to the plan for 2021	Fact		
			JV "AkzholKurylys – AzVirt – AssanaDorStroy"		
			foreigners	citizens of Kazakhstan from other regions	local
1	Project Manager	1		1	
2	Section foremaster	2			1
3	CMP	3			20
5	Foreman	2			2
6	Master	6			6
7	Artificial Engineer	1			1
8	Chief of Asph.plant	2			
9	Chief of Soil-mix.plant	-			
10	Head of Laboratory	1			1
11	Laboratory assistants	8			8
12	Head of Survey Department	1			1
13	Surveying engineer	1			1
14	Surveyor	6			6
15	Surveyor assistant	6			6
16	Geomatics engineer	1			1
17	Road safety officer	1			1
18	OHS officer	1			

19	Environmental	1			1
20	Mechanic	1			1
21	Operator	162			129
22	Dump track operator	90			90
23	Passenger car driver	10			10
24	Paramedic	1			1
25	Others	42			67
	SUBTOTAL			1	364
	TOTAL	350	365		

Table 11. Material Delivering

№	Item	Units	Total needs	Needs for 2021	Performed since beginning
1	Crushed stone	ths.m3	663,69	239.5	227,904
2	SGM	ths.m3	167,656	62,87	0,00
3	Precast concrete(bridges&culverts)	ths.m3	7,945	6,8	3,331
4	Cement	ths. tn.	23,951	6,9	0,559
5	Bitumen	ths. tn.	28,738	8,7	3,5

III. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1. General Description of Environmental Safeguard Activities (environmental protection measures)

Lot 1

40. The site-specific Environmental Management Plan was submitted by the Contractor for consideration to the Engineer on January 26, 2021 and revised on March 11, 2021. Conditionally approved.
41. The Contractor has entered into a contract for the provision of environmental consulting services with Eco Project Company LLP. The Contractor's full-time environmental specialist is Gulnur Ussina. She was hired at the end of June. So no site visits were possible from ES of Contractor during the reporting period. The outsourcing company provides constant monitoring of ongoing construction work for compliance with environmental policy, as well as all measures provided for in the EMP. Industrial environmental monitoring, procedures for sampling soil, water, measurements of air pollution are carried out in accordance with the SSEMP by involving specialists from accredited research laboratories and with notification of the ES. Reports on these works are presented to ES. Baseline environmental monitoring was carried out in March 2021.
42. Monthly /weekly on-site environmental audits were not performed by the consulting company environmental specialist within reporting period. Also, Contractor is developing aggregate materials, building a base without an environmental permit. Written instructions to strengthen control in the field of environmental protection and responsibility of managers was given to Contractor by CSC national ES (Gaukhar Tastanova).

Lot 2

43. There is a full-time environmental specialist at the site – Adil Erekenov.
44. The site-specific EMP, together with the primary environmental monitoring program, was submitted on 21.04.2021 by letter ref. No. 2021/53.
45. The Environmental Management Plan was submitted by the Contractor for consideration to the Engineer on January 26, 2021 and revised on March 11, 2021. The Engineer sent the letter ref.No. 0057-AKKA-2021 with comments for revision.
46. According to Clause 4.18 (Protection of the Environment) Part B - Special Conditions of the Contract and Section 106 A (Protection of the Environment) of the Technical Specifications, Industrial Environmental Monitoring is carried out by a specialized laboratory of HidroEkoResurs-L LLP.
47. Compliance monitoring is carried out by ES of Contractor every month, monitoring reports are provided in a timely manner.
48. The work of the specialists of the ecological laboratory is focused on the constant monitoring and recording of the impact of certain works on the state of the environment. Monitoring and constant supervision of work ensures that deviations from the EMP of IEE are not allowed or that any unforeseen negative consequences are corrected or quickly detected and eliminated. All activities and actions specified in the EMP of IEE are included in the monitoring plans.

49. According to the contractual obligations, the environmental specialist of Contractor adheres to all the requirements of the environmental aspects of the contract document, in particular, the requirements of the General Conditions of the Contract, such as clause 4.7 Layout, 4.8 Security, 4.13. Right of way and facilities, 4.18. Protection of Environment, 6.7 Health and safety protection. Compliance with these clauses of the contract is carried out by environmental specialists through their own monitoring on a weekly, monthly basis.
50. The Contractor's environmental specialist conducts own consultations on environmental protection measures at construction sites among the personnel. During the reporting period, an ecologist conducted training for employees of organizations on health protection, labor safety and environmental protective measures. The topic of the training includes issues of prevention of fuel and lubricants spills, procedures for disposal of soils from the sites of spills. The topics on separate storage of solid waste and industrial waste are also highlighted.
51. In general, the environmental specialist of Asana Dorstroy LLP has demonstrated its commitment to comply with measures to ensure the environmental and social safety of the project and the external environment: during a joint inspection with the CSC, employees and managers were consulted by environmental specialist on environmental issues. At the same time, a notice was issued by CSC NES (Gaukhar Tastanova) to the environmental specialist of the Lot 2 contractor to keep records of audits, identified violations, etc., not limited to the Environmental monitoring (EM) report as well as meeting the deadlines for submitting monthly, semi-annual and EM reports.

3.2 Engineering Service

52. Tastanova Gaukhar, mobilized as national environmental specialist (ES) by CSC conducted field inspections of Lots 1 and Lot 2 construction sites. The reports of environmentalists of contractors, reports on the IEM were reviewed by ES of CS.
53. The activities carried out by the national environmental specialist of CSC during the monitoring period are presented in Table 12. The CSC did not hire international environmental specialist.

Table 12. Environmental Safeguards Activities Carried out During Reporting Period (January- June 2021)

Environmental Safeguard Activities
National Environmental Safeguard Specialist (Gaukhar Tastanova) (Gaukhar Tastanova), Construction Supervision Consultant
<ul style="list-style-type: none"> - Site visits to audit SSEMP and EMP implementation - Overview of SSEMP. - Preparation of a draft semi-annual environmental monitoring report.

3.3. On-site audit (site visit)

54. During the reporting period, a number of visits were carried out to monitor the implementation of the EMP measures, to analyze potential risks in the field of environmental safety of the project. According to the results of the audit, the engineer's comments and recommendations were issued.

Table 13. Issued comments and recommendations by the Engineer

	Contractor	Subject	№ of letter and date
1	Lot 1	Site Specific EMP	0324-AKKA-2021 d-d 13.08.2021
2	Lot 1	Approval of “EcoProjcet Company” LLP for IEM	0325-AKKA-2021 from 13.08.2021
3	Lot 1	EM Report. Engineer’s comments	0326-AKKA-2021 d-d 13.08.2021
4	Lot 2	EM Report. Engineer’s comments	0327-AKKA-2021 d-d 13.08.2021
5	Lot 1	Engineer’s notice	0328-AKKA-2021 d-d 13.08.2021

3.4 Problem Tracking (Based on Non-Compliance Notifications)

55. During the visits to the sites together with representatives of contractors, non-conformities were revealed in most cases on waste management issues:
- storage and disposal of hazardous and non-hazardous waste, violation of the solid waste control system. The importance of strengthening control over ensuring environmental safety in terms of compliance with the schedule for removal for subsequent disposal of solid waste and industrial waste at the sites and on the territory of the base was noted.
 - at all sections, the attention of project managers was drawn to the need on continuous dust suppression in areas where intensive construction work is underway.
56. During the reporting period, there were no complaints or grievances about non-compliance with environmental safeguards.

3.5 Trends (general directions)

57. Since this is the first SAEMR, no trends can be identified at this time.

3.6 Unforeseen environmental impacts or risks

58. During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers. There were no major delays during the monitoring period due to the COVID-19 situation. No cases of COVID-19 among workers were reported during the monitoring period.
59. The Contractor on Lot 2 developed Occupational Health and Safety Plan as part of its SSEMP which includes, inter alia, corresponding measures on prevention of the spread of COVID-19. The Contractor's SSEMP also includes Emergency Management Plan.
60. Contractors' personnel wear mask, PPE as gloves, helmets and working wear.

IV. ENVIRONMENTAL MONITORING RESULTS

4.1 General information about the monitoring carried out during the current period

61. Work on industrial monitoring of environmental protection, at construction sites for Lot 1, Lot 2, were carried out by the testing laboratory of "HydroEcoResource - L" LLP on the basis of an agreement for the provision of services for environmental monitoring. The laboratory has a accreditation certificate KZ T.05.1400 dated August 14, 2018, for a period until August 14, 2023, confirming the existence of the conditions necessary for performing measurements in the area of activity assigned to the laboratory: analytical control of indicators of pollutants in the working area, atmospheric air and sources of air emission, natural waters, as well as analysis of soil and physical factors of influence.
62. The laboratory's activities are regulated by guidelines and regulations in the field of environmental protection, sanitary and hygienic standards, requirements, lists of maximum permissible concentrations, approximate safe exposure levels, maximum permissible discharges and emissions of harmful substances operating in the territory of the Republic of Kazakhstan. Industrial monitoring works were performed in accordance with the Environmental Code of the Republic of Kazakhstan dated January 9, 2007 No. 212-III.
63. During the reporting period, measurements and laboratory studies were carried out at construction sites of both lots (at the same points where measurements were made before the start of construction) in the context of monthly indicators. Copies of monthly reports are attached (*Annex 2*).
64. Reconstruction of the road (construction work) in accordance with sanitary regulations No. 237 dated 20.03.2015 belongs to the IV category. The production base at the time of construction work belongs to the III class of hazard according to the sanitary rules, and to the II category according to the environmental code of the Republic of Kazakhstan. Until August 1, the Contractor must obtain a decision from the authorized agency on the category of the object in accordance with the Environmental Code of the Republic of Kazakhstan No. 400-VI dated 02.01.2021.
65. Contractors keep internal records, form and submit periodic reports on the results of industrial environmental control in accordance with the requirements established by the authorized agencies in the field of environmental protection on the basis of the Environmental Code of the Republic of Kazakhstan (Article 133. Accounting and reporting on industrial environmental control).
66. Impacts are recorded in environmental records and tracked against the activities described in the SSEMP. In accordance with the SSEMP and along with the Environmental Monitoring Plan, the Contractors measured and monitored the quality of air, soil, noise, vibration and socio-cultural resources. Monitoring results based on laboratory measurement protocols are presented in the Contractors' monthly report (*Annex 1*).
67. The sampling points according to monitoring reports for all samples, measurements and tests are presented on the maps for both lots (*Annexes 3, 4*).

Lot-1 (km11-52)

68. The Environmental Management Plan was submitted by the Contractor for the Engineer's approval on January 26, 2021 and revised on March 11, 2021. The Engineer sent the letter No. 0057-AKKA-2021 with comments for revision.

69. During the reporting period an accredited laboratory monitored atmospheric air, water resources, soil and noise at the sampling points along the project road section,. No exceeding of the maximum permissible concentration of pollutants has been detected.

Lot-2 (km52-100)

70. The General EMP, together with the initial environmental monitoring, was submitted on 21.04.2021 by letter ref. No. 2021/53.
71. The Environmental Management Plan was submitted by the Contractor for reviewing to the Engineer on January 26, 2021 and revised on March 11, 2021. The Engineer sent the letter No. 0057-AKKA-2021 with comments for revision.
72. According to Clause 4.18 (Environmental Protection) Part B - Special Conditions of the Contract and Section 106 A (Environmental Protection) of the Technical Specifications, Industrial Environmental Monitoring is carried out by a specialized laboratory - GidroEkoResurs-L LLP.
73. Monitoring is carried out every month, monitoring reports are provided in a timely manner.
74. During the reporting period along the reconstructed section of the road, an accredited laboratory monitored atmospheric air, water resources, soil and noise. The excess of the maximum permissible concentration of pollutants has not been found.

4.2 Air Quality

Lot-1

75. When carrying out earthworks, such as removing the top-soil with a bulldozer; storage of top-soil; excavation of soil with an excavator; dumping soil from a dump truck; leveling the soil with a bulldozer releases inorganic dust into the atmosphere. To reduce the impact on the atmospheric air, the Contractor takes the following measures:
- suppression of dust by water sprinkling
 - open burning of fuel, garbage, binders is prohibited.
 - all technical means must be in working order.
76. On the site, 9 watering vehicles were mobilized.
77. Instrumental measurements of air quality are carried out monthly as per IEE/EMP requirements. Air sampling is carried out every 10 km: at km11; 21; 31; 41; 52.
78. Simultaneously with sampling, meteorological characteristics were measured:
- outside air temperature;
 - speed of the discharged air-gas mixture;
 - atmosphere pressure;
 - humidity of the outside air.
79. Instrumental measurements of emissions were carried out by direct measurements of the concentrations of pollutants (suspended solids, carbon monoxide, nitrogen dioxide, sulfur dioxide): by the express method, by a universal gas analyzer GANK-4, by sampling for specially treated pipes of the pressure Pitot modification.
80. The air sampling points are presented on the map (*Annex 3*).

81. The ACP is located at 33 km, borrow pits – at km 14, 18, 21, 25, 28 (Bestamak), 34, 37, 39, 42, 44, 46, 48, 52, 53 (taking into account the detour of Alga)

Lot-2

82. When carrying out earthworks, such as removing the top-soil with a bulldozer; storage of top-soil; excavation of soil with an excavator; dumping soil from a dump truck; leveling the soil with a bulldozer releases inorganic dust into the atmosphere. To reduce the impact on the atmospheric air, the Contractor takes the following measures:

- suppression of dust
- open burning of fuel, garbage, binders is prohibited.
- all technical means must be in working order.

83. On the site, 11 watering machines were used.

84. Instrumental measurements of atmospheric air quality were carried out at **20** sampling points:

- Aktobe-Astrakhan highway, km 52-100 - **2 points** (beginning and end of the road)
- Temporary production base - **2 points** (upwind and leeward side).
- Asphalt concrete plant BENNINGHOVEN MBA 2000 - **4 points** (to the North, South, West, East).
- Asphalt concrete plant TSAP-2000PT - **4 points** (to the North, South, West, East).
- Residential area (Tamdy settlement, Akkemer settlement, Elek settlement, Kandyagash town) - **2 points** each (upwind and leeward sides).
- Borrow pits №№ 1-5 4 points (on the sides of the world).
- Storage place for aggregate materials No.1-5 – 4 points (on the sides of the world)

85. Parameters for the monitoring include following: nitrogen dioxide; inorganic dust 70-20%; sulfur dioxide; carbon oxide; hydrocarbons C12 = C19; Carbon (soot).

86. According to the data of environmental monitoring, none of the monitored substances was found to exceed the maximum permissible concentration.

87. Instrumental measurements of emissions were carried out by direct measurements of the concentrations of pollutants (suspended solids, carbon monoxide, nitrogen dioxide, sulfur dioxide): by the express method, by a universal gas analyzer GANK-4, by sampling for specially treated pipes of the pressure Pitot modification.

88. The ACP is located at km 51, concrete batching plant (CBP)– 51, borrow pits – at km 54, 62, 68, 72, 77, 85, 87, 93, 97.

89. The air sampling points are presented on the map (*Annex 4*).

Table 14. Summarized analysis results of air quality measurements

Sampling point	Name of pollutants	MPC	basic data	actual data, 2021					
				January	February	March (baseline)	April	May	June
Construction sites (road, km 52-100)									
52 km (start point)	Inorganic dust: 70-20%	0.3	0.0127	-	-	0.0127	0.0124	0.0179	0.0162
100 km (end point)	Inorganic dust: 70-20%	0.3	0.0139	-	-	0.0139	0.0133	0.0188	0.0175
Temporary production base									
Windward	Nitrogen dioxide	0.2	0.0067	-	-	0.0067	0.0061	0.0088	0.0079
	Nitrogen oxide	0.4	0.0039	-	-	0.0039	0.0040	0.0063	0.0070
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.071	-	-	0.071	0.083	0.108	0.112
	Hydrocarbons C12-C19	1.0	0.166	-	-	0.166	0.154	0.143	0.137
	Inorganic dust: 70-20%	0.3	0.0117	-	-	0.0117	0.0120	0.0172	0.0175
	Carbon (soot)	0.15	0.0119	-	-	0.0119	0.0111	0.0110	0.0115
Downwind	Nitrogen dioxide	0.2	0.0079	-	-	0.0079	0.0075	0.0085	0.0081
	Nitrogen oxide	0.4	0.0060	-	-	0.0060	0.0058	0.0072	0.0075
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.080	-	-	0.080	0.088	0.117	0.120
	Hydrocarbons C12-C19	1.0	0.179	-	-	0.179	0.170	0.150	0.145
	Inorganic dust: 70-20%	0.3	0.0129	-	-	0.0129	0.0129	0.0195	0.0189
	Carbon (soot)	0.15	0.0126	-	-	0.0126	0.0120	0.0113	0.0127
Asphalt-concrete Plant BENNINGHOVEN MBA 2000									
North	Nitrogen dioxide	0.2	0.0060	-	-	0.0060	0.0055	0.0055	0.0048
	Nitrogen oxide	0.4	0.0040	-	-	0.0040	0.0034	0.0039	0.0041
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.072	-	-	0.072	0.068	0.069	0.065
	Hydrocarbons C12-C19	1.0	0.165	-	-	0.165	0.153	0.163	0.165
	Inorganic dust: 70-20%	0.3	0.0115	-	-	0.0115	0.0116	0.0148	0.0150
	Carbon (soot)	0.15	0.0131	-	-	0.0131	0.0129	0.0125	0.0129
South	Nitrogen dioxide	0.2	0.0065	-	-	0.0065	0.0061	0.0057	0.0055
	Nitrogen oxide	0.4	0.0042	-	-	0.0042	0.0040	0.0045	0.0048

	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.069	-	-	0.069	0.069	0.067	0.069
	Hydrocarbons C12-C19	1.0	0.169	-	-	0.169	0.161	0.165	0.168
	Inorganic dust: 70-20%	0.3	0.0119	-	-	0.0119	0.0116	0.0156	0.0153
	Carbon (soot)	0.15	0.0127	-	-	0.0127	0.0125	0.0132	0.0138
West	Nitrogen dioxide	0.2	0.0061	-	-	0.0061	0.0062	0.0064	0.0067
	Nitrogen oxide	0.4	0.0037	-	-	0.0037	0.0039	0.0038	0.0042
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.074	-	-	0.074	0.072	0.070	0.072
	Hydrocarbons C12-C19	1.0	0.167	-	-	0.167	0.168	0.172	0.175
	Inorganic dust: 70-20%	0.3	0.0117	-	-	0.0117	0.0120	0.0161	0.0165
	Carbon (soot)	0.15	0.0139	-	-	0.0139	0.0138	0.0136	0.0141
East	Nitrogen dioxide	0.2	0.0066	-	-	0.0066	0.0064	0.0067	0.0069
	Nitrogen oxide	0.4	0.0040	-	-	0.0040	0.0041	0.0043	0.0047
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.072	-	-	0.072	0.070	0.073	0.075
	Hydrocarbons C12-C19	1.0	0.173	-	-	0.173	0.175	0.179	0.181
	Inorganic dust: 70-20%	0.3	0.0120	-	-	0.0120	0.0122	0.0165	0.0168
	Carbon (soot)	0.15	0.0134	-	-	0.0134	0.0137	0.0140	0.0145
Asphalt Concrete plant TSAP-2000PT									
North	Nitrogen dioxide	0.2	0.0076	-	-	0.0076	0.0078	0.0077	0.0068
	Nitrogen oxide	0.4	0.0052	-	-	0.0052	0.0053	0.0065	0.0067
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.091	-	-	0.091	0.089	0.086	0.077
	Hydrocarbons C12-C19	1.0	0.123	-	-	0.123	0.119	0.115	0.109
	Inorganic dust: 70-20%	0.3	0.0111	-	-	0.0111	0.0108	0.0150	0.0148
	Carbon (soot)	0.15	0.0108	-	-	0.0108	0.0108	0.0103	0.0111
South	Nitrogen dioxide	0.2	0.0080	-	-	0.0080	0.0081	0.0080	0.0075
	Nitrogen oxide	0.4	0.0049	-	-	0.0049	0.0050	0.0059	0.0060
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.089	-	-	0.089	0.087	0.088	0.081

	Hydrocarbons C12-C19	1.0	0.124	-	-	0.124	0.120	0.121	0.112
	Inorganic dust: 70-20%	0.3	0.0116	-	-	0.0116	0.0116	0.0155	0.0151
	Carbon (soot)	0.15	0.0112	-	-	0.0112	0.0111	0.0109	0.0107
West	Nitrogen dioxide	0.2	0.0081	-	-	0.0081	0.0079	0.0082	0.0075
	Nitrogen oxide	0.4	0.0055	-	-	0.0055	0.0054	0.0064	0.0059
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.084	-	-	0.084	0.081	0.084	0.080
	Hydrocarbons C12-C19	1.0	0.119	-	-	0.119	0.115	0.118	0.120
	Inorganic dust: 70-20%	0.3	0.0109	-	-	0.0109	0.0109	0.0148	0.0152
	Carbon (soot)	0.15	0.0120	-	-	0.0120	0.0117	0.0115	0.0118
East	Nitrogen dioxide	0.2	0.0073	-	-	0.0073	0.0075	0.0077	0.0069
	Nitrogen oxide	0.4	0.0061	-	-	0.0061	0.0060	0.0067	0.0062
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.088	-	-	0.088	0.083	0.083	0.085
	Hydrocarbons C12-C19	1.0	0.127	-	-	0.127	0.129	0.124	0.121
	Inorganic dust: 70-20%	0.3	0.0114	-	-	0.0114	0.0114	0.0152	0.0156
	Carbon (soot)	0.15	0.0116	-	-	0.0116	0.0113	0.0116	0.0120
Residential area of Tamdy village									
Windward	Nitrogen dioxide	0.2	0.0045	-	-	0.0045	0.0040	0.0038	0.0041
	Nitrogen oxide	0.4	0.0036	-	-	0.0036	0.0037	0.0045	0.0037
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.052	-	-	0.052	0.063	0.067	0.071
	Hydrocarbons C12-C19	1.0	0.119	-	-	0.119	0.121	0.128	0.112
	Inorganic dust: 70-20%	0.3	0.0114	-	-	0.0114	0.0112	0.0178	0.0164
	Carbon (soot)	0.15	0.0125	-	-	0.0125	0.0125	0.0124	0.0115
Downwind	Nitrogen dioxide	0.2	0.0051	-	-	0.0051	0.0048	0.0043	0.0045
	Nitrogen oxide	0.4	0.0055	-	-	0.0055	0.0055	0.0059	0.0048
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.064	-	-	0.064	0.068	0.066	0.074
	Hydrocarbons C12-C19	1.0	0.130	-	-	0.130	0.131	0.138	0.121
	Inorganic dust: 70-20%	0.3	0.0120	-	-	0.0120	0.0117	0.0190	0.0181

	Carbon (soot)	0.15	0.0135	-	-	0.0135	0.0130	0.0139	0.0128
Residential area of Akkemer village									
Windward	Nitrogen dioxide	0.2	0.0052	-	-	0.0052	0.0055	0.0071	0.0069
	Nitrogen oxide	0.4	0.0041	-	-	0.0041	0.0040	0.0049	0.0052
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.068	-	-	0.068	0.064	0.076	0.070
	Hydrocarbons C12-C19	1.0	0.133	-	-	0.133	0.131	0.149	0.151
	Inorganic dust: 70-20%	0.3	0.0112	-	-	0.0112	0.0117	0.0163	0.0171
	Carbon (soot)	0.15	0.0122	-	-	0.0122	0.0123	0.0122	0.0120
Downwind	Nitrogen dioxide	0.2	0.0065	-	-	0.0065	0.0061	0.0077	0.0075
	Nitrogen oxide	0.4	0.0063	-	-	0.0063	0.0064	0.0061	0.0067
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.077	-	-	0.077	0.070	0.085	0.073
	Hydrocarbons C12-C19	1.0	0.149	-	-	0.149	0.146	0.155	0.158
	Inorganic dust: 70-20%	0.3	0.0119	-	-	0.0119	0.0118	0.0189	0.0192
	Carbon (soot)	0.15	0.0131	-	-	0.0131	0.0131	0.0130	0.0128
Residential area of Elek village									
Windward	Nitrogen dioxide	0.2	0.0049	-	-	0.0049	0.0049	0.0050	0.0042
	Nitrogen oxide	0.4	0.0029	-	-	0.0029	0.0034	0.0036	0.0037
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.055	-	-	0.055	0.059	0.067	0.074
	Hydrocarbons C12-C19	1.0	0.117	-	-	0.117	0.109	0.134	0.141
	Inorganic dust: 70-20%	0.3	0.0112	-	-	0.0112	0.0115	0.0180	0.0169
	Carbon (soot)	0.15	0.0124	-	-	0.0124	0.0124	0.0133	0.0103
Downwind	Nitrogen dioxide	0.2	0.0062	-	-	0.0062	0.0065	0.0060	0.0051
	Nitrogen oxide	0.4	0.0048	-	-	0.0048	0.0050	0.0043	0.0045
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.066	-	-	0.066	0.069	0.075	0.085
	Hydrocarbons C12-C19	1.0	0.129	-	-	0.129	0.116	0.150	0.153
	Inorganic dust: 70-20%	0.3	0.0126	-	-	0.0126	0.0127	0.0197	0.0185
	Carbon (soot)	0.15	0.0135	-	-	0.0135	0.0132	0.0148	0.0128

Residential area of Kandyagash city									
Windward	Nitrogen dioxide	0.2	0.0055	-	-	0.0055	0.0051	0.0058	0.0064
	Nitrogen oxide	0.4	0.0033	-	-	0.0033	0.0025	0.0042	0.0048
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.054	-	-	0.054	0.058	0.056	0.051
	Hydrocarbons C12-C19	1.0	0.113	-	-	0.113	0.112	0.115	0.105
	Inorganic dust: 70-20%	0.3	0.0110	-	-	0.0110	0.0110	0.0169	0.0171
	Carbon (soot)	0.15	0.0128	-	-	0.0128	0.0126	0.0136	0.0128
Downwind	Nitrogen dioxide	0.2	0.0072	-	-	0.0072	0.0062	0.0077	0.0081
	Nitrogen oxide	0.4	0.0052	-	-	0.0052	0.0040	0.0071	0.0069
	Sulfur dioxide	0.5	n/a	-	-	n/a	n/a	n/a	n/a
	Carbon monoxide	5.0	0.067	-	-	0.067	0.069	0.067	0.065
	Hydrocarbons C12-C19	1.0	0.125	-	-	0.125	0.123	0.122	0.118
	Inorganic dust: 70-20%	0.3	0.0122	-	-	0.0122	0.0121	0.0190	0.0185
	Carbon (soot)	0.15	0.0134	-	-	0.0134	0.0135	0.0150	0.0144
Borrow pits No.1-9									
North	Nitrogen dioxide	0.2	0.0053	-	-	0.0053	-	-	0.0048
	Nitrogen oxide	0.4	0.0046	-	-	0.0046	-	-	0.0042
	Sulfur dioxide	0.5	n/a	-	-	n/a	-	-	n/a
	Carbon monoxide	5.0	0.093	-	-	0.093	-	-	0.078
	Hydrocarbons C12-C19	1.0	0.117	-	-	0.117	-	-	0.117
	Inorganic dust: 70-20%	0.3	0.0120	-	-	0.0120	-	-	0.0115
	Carbon (soot)	0.15	0.0239	-	-	0.0239	-	-	0.0223
South	Nitrogen dioxide	0.2	0.0062	-	-	0.0062	-	-	0.0059
	Nitrogen oxide	0.4	0.0049	-	-	0.0049	-	-	0.0045
	Sulfur dioxide	0.5	n/a	-	-	n/a	-	-	n/a
	Carbon monoxide	5.0	0.089	-	-	0.089	-	-	0.0075
	Hydrocarbons C12-C19	1.0	0.120	-	-	0.120	-	-	0.120
	Inorganic dust: 70-20%	0.3	0.0126	-	-	0.0126	-	-	0.0119
	Carbon (soot)	0.15	0.0228	-	-	0.0228	-	-	0.0219
West	Nitrogen dioxide	0.2	0.0058	-	-	0.0058	-	-	0.0055

	Nitrogen oxide	0.4	0.0051	-	-	0.0051	-	-	0.0048
	Sulfur dioxide	0.5	n/a	-	-	n/a	-	-	n/a
	Carbon monoxide	5.0	0.088	-	-	0.088	-	-	0.074
	Hydrocarbons C12-C19	1.0	0.115	-	-	0.115	-	-	0.115
	Inorganic dust: 70-20%	0.3	0.0123	-	-	0.0123	-	-	0.0121
	Carbon (soot)	0.15	0.0246	-	-	0.0246	-	-	0.0236
East	Nitrogen dioxide	0.2	0.0059	-	-	0.0059	-	-	0.0051
	Nitrogen oxide	0.4	0.0055	-	-	0.0055	-	-	0.0052
	Sulfur dioxide	0.5	n/a	-	-	n/a	-	-	n/a
	Carbon monoxide	5.0	0.090	-	-	0.090	-	-	0.081
	Hydrocarbons C12-C19	1.0	0.118	-	-	0.118	-	-	0.118
	Inorganic dust: 70-20%	0.3	0.0128	-	-	0.0128	-	-	0.0125
	Carbon (soot)	0.15	0.0234	-	-	0.0234	-	-	0.00228
Aggregate materials storage site									
North	Inorganic dust: 70-20%	0.3	0.0112	-	-	0.0112	-	-	0.0121
South	Inorganic dust: 70-20%	0.3	0.0108	-	-	0.0108	-	-	0.0118
West	Inorganic dust: 70-20%	0.3	0.0118	-	-	0.0118	-	-	0.0113
East	Inorganic dust: 70-20%	0.3	0.0115	-	-	0.0115	-	-	0.0116

4.3 Water Quality

Lot-1

90. There is no groundwater close to the construction site. There are no hydrological posts near the object to monitor ground and surface waters. For production needs, water is used for irrigation, as well as for the preparation of concrete and mortars. There will be no direct discharge of wastewater from the construction of the facility into surface river waters, as well as into underground waters, which lie deep within the territory and do not pinch out anywhere. In this connection, there is no negative impact on the aquatic environment. Industrial and drinking water are delivered by water carriers. Groundwater monitoring is not carried out (there are no wells). Surface water monitoring is carried out by sampling from the Ileik River. The monitoring results are shown in Table 15. The location of the control points is indicated on the map (*Annex 3*).

91. Water resources for technological needs are used carried out from the Ileik River. Permission for special water use has not been received. Water treatment is not kept.

92. To prevent water pollution during the construction period, the Contractor concluded an agreement with:

- a specialized organization for the removal of wastewater;
- organize the collection and removal of water and other liquid waste arising at the Construction Site to specially designated treatment facilities agreed with local authorities so as not to cause pollution of surface and ground waters.

Table 15. Summarized results of analysis of water quality measurements

Control points	Pollutants	MPC	Basic data	Actual data, 2021					
				January	February	March (base line)	April	May	June
Ilek river									
Point 1	Nitrates	no more than 45	<0,1	-	-	-	<0,1	0,11	0,14
	Nitrites	no more than 3.3	0,02	-	-	-	0,02	0,05	0,07
	Chlorides	no more than 350	46,70	-	-	-	46,70	123,33	178,33
	Sulfates	no more than 500	81,50	-	-	-	81,50	94,67	100,02

Lot-2 (km52-100)

93. Water resources are monitored on the Tabantal, Talasbay and Batpakty rivers flowing in this area. Controlled substances: suspended particles, chlorides, sulfates, nitrates, nitrites, ammonia, oil products, BOD5, COD.
94. There is no closely spaced groundwater on the construction site. There are no hydrological posts near the object to monitor ground and surface waters. For production needs, water is used for irrigation, as well as for the preparation of concrete and mortars. There will be no direct discharge of wastewater from the construction of the facility into surface river waters, as well as into underground waters, which lie deep within the territory and do not wedge out anywhere. In this connection, there is no negative impact on the aquatic environment.
95. Water intake for technological needs is carried out from the Batpakty and Ilek Rivers.
96. There is no wastewater discharge during the construction of the facility to the Tabantal, Talasbay and Batpakty rivers. As shown by the results of laboratory studies, the concentration of substances does not exceed the established MPC. In this connection, there is no negative impact on the aquatic environment. Sampling points are on the Batpakty river (km 64), Talasbay river (km 67), Tabantal river (km 79). Points 1-2 are on both sides of the bridge. The monitoring results are shown in Table 16. The location of the control points is indicated on the map (*Annex 4*).

Table 16. Summarized analysis results of water quality measurements

Sampling point	Name of pollutants	MPC	Basic data	Actual data, 2021					
				January	February	March (baseline)	April	May	June
Tabantal River									
Point 1	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.76	0.102	0.111

	Chlorides	no more than 350	128.5	-	-	128.5	119.8	128.2	129.5
	Sulfates	no more than 500	219.5	-	-	219.5	288.0	306.0	345.0
	Nitrates	no more than 45	19.3	-	-	19.3	15.3	13.9	12.5
	Nitrites	no more than 3.3	1.04	-	-	1.04	1.0	1.01	1.16
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.88	0.76	0.65
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.023	0.021	0.036
	Five-day bod	3-6	4.04	-	-	4.04	4.02	4.0	3.5
	COD	15-30	15.9	-	-	15.9	16.2	17.4	15.8
Point 2	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.78	0.99	0.101
	Chlorides	no more than 350	128.5	-	-	128.5	124.0	131.8	145.8
	Sulfates	no more than 500	219.5	-	-	219.5	288.1	298.4	321.4
	Nitrates	no more than 45	19.3	-	-	19.3	17.0	16.0	14.9
	Nitrites	no more than 3.3	1.04	-	-	1.04	0.97	0.98	0.78
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.91	0.88	0.74
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.036	0.033	0.041
	Five-day bod	3-6	4.04	-	-	4.04	4.03	4.1	4.3
	COD	15-30	15.9	-	-	15.9	16.7	17.7	16.6
Talasbai River									
Point 1	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.77	0.86	0.93
	Chlorides	no more than 350	128.5	-	-	128.5	170.1	168.7	155.8
	Sulfates	no more than 500	219.5	-	-	219.5	325.5	312.3	256.3
	Nitrates	no more than 45	19.3	-	-	19.3	14.6	13.8	13.2
	Nitrites	no more than 3.3	1.04	-	-	1.04	0.90	0.87	0.96
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.72	0.78	0.79
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.041	0.047	0.036
	Five-day bod	3-6	4.04	-	-	4.04	4.11	4.23	4.18
	COD	15-30	15.9	-	-	15.9	16.6	16.0	15.3
Point 2	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.80	0.93	0.98

	Chlorides	no more than 350	128.5	-	-	128.5	176.4	172.4	169.2
	Sulfates	no more than 500	219.5	-	-	219.5	329.2	320.0	296.0
	Nitrates	no more than 45	19.3	-	-	19.3	15.1	14.9	14.7
	Nitrites	no more than 3.3	1.04	-	-	1.04	0.86	0.82	0.90
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.81	0.88	0.85
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.039	0.045	0.041
	Five-day bod	3-6	4.04	-	-	4.04	4.19	4.31	4.25
	COD	15-30	15.9	-	-	15.9	17.0	17.1	16.5
Batpakty River									
Point 1	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.68	0.81	0.78
	Chlorides	no more than 350	128.5	-	-	128.5	163.8	160.4	156.2
	Sulfates	no more than 500	219.5	-	-	219.5	353.8	304.6	315.9
	Nitrates	no more than 45	19.3	-	-	19.3	15.0	12.4	15.7
	Nitrites	no more than 3.3	1.04	-	-	1.04	0.89	0.86	0.74
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.88	0.68	0.65
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.030	0.034	0.041
	Five-day bod	3-6	4.04	-	-	4.04	4.0	4.11	4.15
	COD	15-30	15.9	-	-	15.9	15.9	15.3	14.8
Point 2	Substances insoluble in water	not standardized	0.69	-	-	0.69	0.71	0.90	0.85
	Chlorides	no more than 350	128.5	-	-	128.5	170.1	170.0	169.0
	Sulfates	no more than 500	219.5	-	-	219.5	329.2	316.4	321.4
	Nitrates	no more than 45	19.3	-	-	19.3	16.2	12.0	15.9
	Nitrites	no more than 3.3	1.04	-	-	1.04	0.77	0.82	0.81
	Ammonium nitrogen	no more than 2.0	0.98	-	-	0.98	0.91	0.72	0.75
	Petrochemicals	no more than 0.1	0.04	-	-	0.04	0.038	0.038	0.049
	Five-day bod	3-6	4.04	-	-	4.04	4.01	4.24	4.31
	COD	15-30	15.9	-	-	15.9	16.3	16.1	15.9

4.4 Noise and Vibration

Lot-1

97. The main source of noise (vibration) is road construction equipment. Instrumental monitoring is carried out by a certified laboratory as part of monthly environmental monitoring. According to the results of measurements of noise and vibration at 5 sampling points, no excess of the established standards was recorded.

Table 17. Summarized results of analysis of noise level measurements

Sampling point	MPC	Basic data	actual data, 2021						
			January	February	March	April (baseline)	May	June	
Road section km 11-52									
Road section km 11	80	48	-	-	-	48	52	51	
Road section km 21	80	50	-	-	-	50	50	58	
Road section km 31	80	49	-	-	-	49	48	51	
Road section km 41	80	50	-	-	-	50	48	51	
Road section km 52	80	52	-	-	-	52	47	46	

Table 18. Summarized results of the analysis of vibration measurements

Sampling point	MPC	Basic data	actual data, 2021						
			January	February	March	April (baseline)	May	June	
Road section km 11-52									
Road section km 11	107	44	-	-	-	44	40	41	
Road section km 21	107	43	-	-	-	43	38	34	
Road section km 31	107	41	-	-	-	41	36	38	
Road section km 41	107	43	-	-	-	43	39	36	
Road section km 52	107	41	-	-	-	41	38	31	

Lot-2

98. The main source of noise (vibration) is road construction equipment. Instrumental monitoring is carried out by a certified laboratory as part of monthly environmental monitoring. According to the results of measurements of noise and vibration, no excess of the established standards was recorded.

Table 19. Summarized analysis results of vibration measurements

Sampling point	MPC	basic data	Actual data, 2021					
			January	February	March	April (baseline)	May	June
Section of the Aktobe-Atyrau road (km 52-100)								
Road section km 52	95	48.29	-	-	-	48.29	48.14	47.57
Road section km 100	95	49.57	-	-	-	49.57	49.7	49.14

Asphalt-concrete plant BENNINGHOVEN MBA 2000								
Point 1	95	49.14	-	-	-	49.14	49.6	49.57
Point 2	95	49.86	-	-	-	49.86	49.7	43.00
Asphalt Concrete plant TSAP-2000PT								
Point 1	95	50.14	-	-	-	50.14	50.3	50.00
Point 2	95	49.57	-	-	-	49.57	50.0	50.14
Temporary production base								
Point 1	95	50.57	-	-	-	50.57	50.57	50.14
Point 2	95	50.0	-	-	-	50.0	50.0	50.00
Residential area								
Tamdy vill.	45-55	49.86	-	-	-	49.86	50.6	49.6
Akkemer vill.	45-55	50.0	-	-	-	50.0	49.7	49.2
Elek vill.	45-55	50.29	-	-	-	50.29	50.4	49.9
Kandyagash city	45-55	50.71	-	-	-	50.71	50.4	49.8

4.5. Monitoring of flora and fauna

99. The monitoring of flora and fauna is carried out visually. No trees cutting done and no illegal poaching cases recorded by ES of CSC within reporting period.

4.6. Use of material resources

Lot 1

Table 20. Resources consumption by Contractors of Lot 1

No	Materials	Unit	Total for the project	Total on Site
1.1	Crushed stone 0-80 mm	tons	60900	0
1.2	Crushed stone 0-40 mm	tons	11100	0
	Total	tons	72000	

Lot 2

100. Resources consumption tracking has started in 01.03.2021 by the end of June 2021.

Table 21. Resources consumption by Contractors of Lot 2

No	Materials	Unit	Total for the project	Total on Site
1.1	Crushed stone 0-5 mm	tons	182734	2217
1.2	Crushed stone 5-10 mm	tons	55642	0

№	Materials	Unit	Total for the project	Total on Site
1.3	Crushed stone 10-20 mm	tons	114353	0
1.4	Crushed stone 5-20 mm	tons	111016	80268
1.5	Crushed stone 20-40 mm	tons	154774	93440
1.6	Crushed stone 40-70 mm	tons	54121	49805
1.7	Crushed stone sand mix C4	tons	256522	34781
	Total	tons	929165	260511
2.1	Bitumen	tons	8700	3,5
3.1	Cement M400	tons	23951	0

4.7. Waste management

Lot-1 (km11-52)

101. Industrial waste was not generated within reporting period. During the reporting period the industrial camp was at the stage of mobilization, the site employees were in rented office space in the city of Alga. Accordingly, the removal and storage of solid waste was carried out at the expense of the owner of the office building.
102. To prevent contamination of soil resources during the construction period, the Engineer issued a prescription to the Contractor:
- organize places for temporary storage of waste
 - conclude an agreement and organize the collection, removal and calculation of waste.

Lot-2 (km52-100)

103. Industrial waste was not generated within reporting period. Storage of solid waste within the camp is carried out in labeled containers. The removal of solid waste and liquid waste is carried out as it accumulates under contracts with specialized organizations. The volume of solid waste for the reporting period is to 30 tons, liquid waste - 53 m3.
104. On the territory of the camp base there is no organized place for the temporary storage of waste.
105. The Contractor has concluded following agreements for the garbage removal/disposal:

Table 22. Agreements on waste disposal

Contract № 23/3 dated 01.04.2021 г.	with GKP "Alga-Zhylyu" for pumping and removal of wastewater
Contract № 6/21 dated 09.12.2020 г.	with EcoPromKZ LLP for the disposal of production waste
Contract №14 dated 04.02.2021 г.	with IP "Tazalyk 2015" for the disposal of solid waste at the landfill

4.8. Borrow pits and its management

Lot-1 (km11-52)

106. The Contractor has not received environmental permits for the extraction and development of inert minerals (COMR) within reporting period.
107. According to the administrative division, the sections Ground Reserves No.1-13 are located in the immediate vicinity of the highway of republican significance A-27 "Aktobe-Atyrau-border of the Russian Federation", to Astrakhan (11-52 km), respectively, in the Alga and Mugalzhar districts of Aktobe regions of the Republic of Kazakhstan.
108. Geographical coordinates of the corner points of the allotment, registration stage, valid and absolute marks of the surface of the areas of geological exploration are presented in Table 23.

Table 23. Geographical coordinates of the corner points of the withdrawal, areas and absolute elevations of the surface of the plots

№	Geographical coordinates			Registration stage (for production and exploration)	Permission is valid until
	No. corner point	Northern latitude	Eastern longitude		
1	1	50° 10' 17,0854"	57° 17' 41,2279"	mining permit received on 23.07.2021	12.06.2023
	2	50° 10' 07,8854"	57° 17' 51,3273"		
	3	50° 10' 06,9255"	57° 17' 47,8374"		
	4	50° 10' 16,6554"	57° 17' 40,1579"		
2	1	50° 08' 27,4369"	57° 18' 36,0830"	mining permit received on 23.07.2021	
	2	50° 07' 52,9974"	57° 18' 52,7216"		
	3	50° 07' 52,0574"	57° 18' 47,8916"		
	4	50° 08' 26,4870"	57° 18' 31,2631"		
3	1	50° 06' 26,9986"	57° 19' 33,2879"	mining permit received on 23.07.2021	
	2	50° 06' 19,7187"	57° 19' 36,2575"		
	3	50° 06' 18,1188"	57° 19' 26,4977"		
	4	50° 06' 25,3987"	57° 19' 23,5780"		
4	1	50° 04' 32,3602"	57° 20' 20,9631"	mining permit received on 23.07.2021	
	2	50° 04' 13,4005"	57° 20' 28,4423"		
	3	50° 04' 12,1206"	57° 20' 24,0824"		
	4	50° 04' 29,7504"	57° 20' 11,8532"		
5	1	50° 03' 24,4120"	57° 20' 01,5312"	mining permit received on 23.07.2021	
	2	50° 03' 23,3915"	57° 20' 31,7607"		
	3	50° 03' 10,5018"	57° 20' 30,6403"		

	4	50° 03' 11,6021"	57° 20' 00,5111"	
6	1	50° 00' 06,9041"	57° 22' 12,0920"	mining permit received on 23.07.2021
	2	50° 00' 00,4243"	57° 22' 12,5718"	
	3	49° 59' 59,5147"	57° 21' 42,4625"	
	4	50° 00' 05,9345"	57° 21' 42,0227"	
7	1	49° 58' 53,2057"	57° 22' 02,4100"	mining permit received on 23.07.2021
	2	49° 58' 43,2358"	57° 22' 15,2694"	
	3	49° 58' 35,0061"	57° 21' 59,7895"	
	4	49° 58' 44,8961"	57° 21' 46,9001"	
8	1	49° 57' 42,5758"	57° 23' 45,4952"	mining permit received on 23.07.2021
	2	49° 57' 38,2957"	57° 24' 04,4746"	
	3	49° 57' 19,8162"	57° 23' 54,4743"	
	4	49° 57' 24,1863"	57° 23' 35,5049"	
9	1	49° 54' 57,6885"	57° 24' 35,5489"	mining permit received on 23.07.2021
	2	49° 54' 54,8682"	57° 25' 00,2082"	
	3	49° 54' 38,9086"	57° 24' 56,0978"	
	4	49° 54' 41,6889"	57° 24' 31,4185"	
10	1	49° 53' 08,2124"	57° 22' 20,4188"	mining permit received on 23.07.2021.
	2	49° 52' 57,0125"	57° 22' 29,6382"	
	3	49° 52' 50,4929"	57° 22' 12,2985"	
	4	49° 53' 01,6828"	57° 22' 02,1291"	
11	1	49° 51' 48,3955"	57° 20' 31,4090"	mining permit received on 23.07.2021
	2	49° 51' 35,3257"	57° 20' 33,6986"	
	3	49° 51' 33,8960"	57° 20' 13,7590"	
	4	49° 51' 46,9657"	57° 20' 11,4495"	
12	1	49° 53' 39,4609"	57° 23' 33,0580"	mining permit received on 23.07.2021
	2	49° 53' 29,5906"	57° 24' 12,2867"	
	3	49° 53' 17,8609"	57° 24' 04,7865"	
	4	49° 53' 22,9113"	57° 23' 24,7577"	
13	1	49° 51' 21,6566"	57° 19' 41,8294"	

2	49° 51' 11,9868"	57° 19' 46,4290"	mining permit received on 23.07.2021
3	49° 51' 13,0668"	57° 19' 40,3492"	
4	49° 51' 09,2974"	57° 19' 04,5300"	
5	49° 51' 12,4973"	57° 19' 02,6001"	

Lot-2 (km52-100)

109. The Contractor has received environmental permits for the extraction and development of inert minerals (COMR).
110. According to the administrative division, the soil Reserves No.1-9 are located in the immediate vicinity of the highway of republican significance A-27 "Aktobe-Atyrau-border of the Russian Federation", to Astrakhan (52-100 km), respectively, in the Alga and Mugalzhal districts of Aktobe regions of the Republic of Kazakhstan.
111. Coordinates of the corner points of the site and level points of geology surveys are presented in Table 24.

Table 24. Coordinates of the corner points of the site and absolute level points of geology surveys

No.	Coordinates	
	Northern latitude	Eastern longitude
Ground Reserves No.1		
1	49°48'17,9900"	57°18'42,4024"
2	49°48'16,2577"	57°19'07,4156"
3	49°48'00,1724"	57°19'04,6590"
4	49°48'01,9136"	57°18'39,7082"
The plot area is 0.2503 sq. km. (25.03 ha)		
Ground Reserves No.2		
1	49°44'01,6052"	57°17'53,6796"
2	49°43'59,8071"	57°18'18,7159"
3	49°43'43,7368"	57°18'15,9514"
4	49°43'45,5354"	57°17'50,9151"
The plot area is 0.2513 sq. km. (25.13 ha)		
Ground Reserves No.3		
1	49°41'03,2606"	57°19'02,0914"
2	49°40'47,3637"	57°19'07,5512"
3	49°40'43,8566"	57°18'43,1547"
4	49°40'59,7542"	57°18'37,6967"
The plot area is 0.2515 sq. km. (25.15 ha)		

Ground Reserves No.4		
1	49°38'37,6314"	57°18'51,2485"
2	49°38'21,9451"	57°18'57,3039"
3	49°38'18,0025"	57°18'32,9570"
4	49°38'33,6895"	57°18'26,9009"
The plot area is 0.2510 sq. km. (25.10 ha)		
Ground Reserves No.5		
1	49°36'13,2811"	57°21'03,4683"
2	49°35'57,8390"	57°21'11,4091"
3	49°35'52,7255"	57°20'47,7409"
4	49°36'08,1689"	57°20'39,7990"
The plot area is 0.2514 sq. km. (25.14 ha)		
Ground Reserves No.6		
1	49°31'59,8522"	57°23'28,6725"
2	49°31'44,1431"	57°23'35,0756"
3	49°31'40,0153"	57°23'10,9840"
4	49°31'55,7207"	57°23'04,5878"
The plot area is 0.2509 sq. km. (25.09 ha)		
Ground Reserves No.7		
1	49°31'29,1672"	57°22'00,7789"
2	49°31'14,0800"	57°22'10,0896"
3	49°31'08,0666"	57°21'46,9688"
4	49°31'23,1535"	57°21'37,6581"
The plot area is 0.2510 sq. km. (25.10 ha)		
Ground Reserves No.8		
1	49°29'33,4639"	57°20'33,9230"
2	49°29'25,1262"	57°20'55,2481"
3	49°29'11,2546"	57°20'42,3964"
4	49°29'19,5940"	57°20'21,0697"
The plot area is 0.2500 sq. km. (25.00 ha)		
Ground Reserves No.9		
1	49°27'22,8883"	57°20'23,4342"
2	49°27'11,0865"	57°20'40,4358"
3	49°27'00,0154"	57°20'22,2530"
4	49°27'11,8173"	57°20'05,2496"
The plot area is 0.2501 sq. km. (25.01 ha)		

4.9. Health and Safety

112. The Contractor has taken all safety precautions at all construction sites for the health and safety of workers and people in the vicinity in accordance with the Health and Safety Plan submitted by the Contractors and approved.

4.9.1. Community health and safety

113. Public health information events are regularly held by Kazavtozhol. AIDS prevention seminar is scheduled for the second half of the year. Warning signs are installed at construction sites of both Contractors.

4.9.2. Workers health and safety

114. PPE is provided regularly to all workers/personnel (Photos 1,2).
115. No accidents, incidents and injuries were recorded for both Lots during the reporting period.
116. Lot 1. There is no first-aid post and all the necessary supplies arranged. Sanitary facilities, kitchen, fire-fighting equipment are in compliance as confirmed by ES of CSC. Safety instructions were regularly provided by HS staff of Contractor.
117. Lot 2. The first-aid post (equipped by beds, blood pressure measuring devices, first-aid kits, hired medical personnel) was arranged. Sanitary facilities, kitchen, place for workers' lunch, fire-fighting equipment are in compliance as confirmed by ES of CSC. Safety instructions were regularly provided by HS staff of Contractor.



Photo 1. Lot 1. Workers use PPE, May 2021



Photo 2. Lot 2. Workers use PPE, March 2021

118. COVID 19 pandemic prevention measures are applied by both Contractors such as regular provision of masks, antiseptics to all workers. Also, according to the Contractors' COVID-19 management plan, the following are provided:

- tests of the staff before the start of the shift/flight (including examination by a certified medical professional, including thermometry, pulse, oxygenation)
 - informational and preventive work (posters with visual anti-covid agitation, informing about the signs of infection, preventive measures).
119. A training/seminar on COVID-19 prevention is planned for the 2nd half of 2021 with the involvement of public medical institutions and sanitary inspections.

4.10. Trainings

120. During the on-site audit, the Engineer/CSC NES did on-the job trainings to workers of Contractors, provided guidance on environmental protection issues. An initial safety trainings were carried out directly at the work site with all temporary staff including practical training and induction training for visitors and employees of contracting organizations. Toolbox talks briefing is carried out when the production technology is changed at the request of the State Mining Inspector and in the event of emergencies and accidents.

4.11. GRM functioning

121. The GRM is established for the Project. There are a complaints logbooks arranged for the registration of complaints for both lots. In total three appeals were received from the local population and all of them are in process of resolution within established GRM. The details on appeals (verbal/written) and information on GRC are provided below.

Lot 1 Complaints Management Status:

Date	Applicant	Location	Subject	Description	Mitigation measure	Doc-s/ status
30.04.2021	"Aktobe Agro" farm, Nurgalieva L.M., 87772866086	Aktobe - Alga road area (15-20 km, bridge of the Kumsay river)	Aktobe - Alga road area (15-20 km, bridge of the Kumsay river)	Applicant asks to organize a exit and exit to its farm on the section of the road "Aktobe - Alga" in the interval of 15-20 km, the area of the Kumsay bridge.	KazAvtoZhol is investigating the possibility of organizing this exit in Engineering Center - Astana LLP	Appeal from the PL dated 30.04.2021; Letter from KazAvtoZhol dated 05.06.2021. Status : In process of resolution.
01.06.2021	Group of residents	Bestamak	The wishes of residents in the village akimat were verbally said	A group of residents of the village of Bestamak applied to the akim of the village with a request that during the construction of the road the interests of residents for pedestrian traffic	Akimat and KazAvtoZhol are currently negotiating and resolving this issue	Status: In process of resolution

				inside the village across the road were taken into account		
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Lot 2 Complaints Management Status:

Date	Applicant	Location	Subject	Description	Mitigation measure	Doc-s/ status
18.03.2021	"Smagul" farm, Setkamalov N.N.	between the Elek village and the Kandyagash city	The appeal was sent by the Applicant to the Chamber of Entrepreneurs in 2019; Then the appeal was repeated to the GRM KazAvtoZhol in March 2021	Historical purchase of a land plot. When designing the road, the exit to this farm was not taken into account. The applicant asks to consider the possibility of organizing access roads.	Alternative options for applicants are proposed. The submarine site is bordered by a track of 1 and 2 categories. The best option is to make the contiguity into 2 categories. The applicant is at the decision-making stage.	Applicant statement dated 29.01.2019; Letter of the Chamber of Entrepreneurs No. 0429-0403 dated 29.02.2019; Letter from KazAvtoZhol No. 20-01\20-02-192-I dated 26.02.2019; Appeal of the applicant dated 16.03.2021; Letter from KazAvtoZhol dated 18.03.2021 ref.No. 19-1\19-3\272-I

GRM contact details:

Address: regional branch of JSC "NC "KazAvtoZhol", Aktobe, Astana district, st. Maresyeva, 89, Tel: 8-7132-546571, E-mail: aktobe.info@qaj.kz

Members of the Regional GRM:

1. The head of the GRM: Mambetov Kazbek Ermekovich, Deputy Director of the Aktobe RB JSC "NC "KazAvtoZhol"

Members of GRM:

1. Omirbaev N.B., Project Manager Consultant, tel.: +7 701 533 1041, e-mail: um_nu@mail.ru
2. Vitaly Percentov, project manager of the joint venture "Akzhol Kurylys-AzVirt-AssanaDorStroy", +7-771-039-82-81, e-mail: aaa52-100@mal.ru

3. Savchanchik Pavel - Project Manager (+7 702 224 3278; algaoffice@sinemidas.com), JV "LLP SP SINE MIDAS STROY & TODINI COSTRUZIONI GENERALI S.P.A."
4. Sugralin Radik - Public Relations Manager (+7-701 732 8567; almagulb7@gmail.com) JV "LLP SP SINE MIDAS STROY & TODINI COSTRUZIONI GENERALI S.P.A."
5. Kirill Osin, Social Safeguard Specialist, Dongsung Engineering / ZS Engineering, +77014153161, osinkirill@gmail.com
6. Olesya Chubutkina, Consultant on Social and Environmental Safeguard Measures, tel.: +7 747 450 6309, e-mail: olesya.chubutkina@gmail.com

Key persons of the GRM at the central level:

Head of GRM	N. Bekmurzaev, - Chief manager of external loans department of JSC "NC "KazAvtoZhol"
Coordinator GRM	A. Tashkenbaev, - road engineer of JSC "NC "KazAvtoZhol"

V. SSEMP FUNCTIONING (SITE-SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN)

5.1. SEMP review

122. SEMP of Lots 1,2 in the reporting period did not undergo changes. The measures declared in the SEMP were carried out by the contractors to the required extent and in the proper order and quality. During the reporting period, the ecologists of all Lots ensured the timely provision of reports on industrial environmental monitoring to an independent laboratory.
123. The SEMP contains information on the duration and frequency of monitoring.
124. The SEMP also includes the following plans: Waste management plan, Traffic management plan, Health and safety plan, Emergency response plan, Air quality plan, Spill response plan, Vibration monitoring plan, Noise management plan, Construction vibration management plan, Site specific plans, Construction camp plan, Bridge construction plan (for each bridge construction site).
125. Contractors developed and submitted a Health and Safety Plan; Emergency Preparedness Plan for the elimination of possible accidents (fires, accidents, spills, accidents). At the same time, the Contractors have outlined Action Plans for occupational health and safety (COVID-19) and urgent measures to prevent the spread of coronavirus infection.

5.2. Environmental permits / documentation / licenses status

Table 25. Documents obtained by Contractors

Lot-1 (км 11-52)	Lot -2 (км 52-100)	Subject
KZ19VDD00158437 d-d 11.01.2021	KZ77VDD00157684 d-d 29.12.2020	road reconstruction
	KZ21VDD00159953 d-d 03.02.2021	reconstruction of bridges
	KZ72VCZ01126914 d-d 30.06.2021	grounds reserves
	KZ96VCZ01164797 d-d 14.07.2021	ACP and CMP
	KZ34VTE00040805 d-d 22.01.2021	special water use
	KZ76VTE00064202 d-d 21.05.2021	
	KZ75VTE00068100 d-d 21.06.2021	
	Contract № 23/3 d-d 01.04.2021	pumping and removal of sewage
	Contract № 6/21 d-d 09.12.2020	with EcoPromKZ LLP for the disposal of production waste
	Contract №14 d-d 04.02.2021	with IP "Tazalyk 2015" for the disposal of solid waste at the landfill

VI. BEST PRACTICES (GOOD PRACTICES) AND OPPORTUNITIES FOR THEIR IMPROVEMENT

6.1 Best Methods (Good Practices)

126. In the process of monitoring the site, the SCS noted on Lot 2 the organization of an environmental protection department as a good practice. A local environmental specialist was mobilized at the site, who was entrusted with work on the daily control of the dust suppression schedule, the schedule for the removal of solid waste, landscaping the town and educating employees about environmental literacy. The practice of interaction with the population continues at the site. Leading specialists of the Contractor on a weekly basis participate in meetings of the local akimat and routinely resolve all issues that have arisen from the local population.
127. The contractor of Lot 2 has formed good communication with the local population, which allows him to resolve any problems in a short time, without waiting or ignoring the needs and requirements of the local population in obtaining information on the impact of the project on the life and lifestyle of the local population. This practice allowed the GRM to operate effectively in this area. Not a single appeal was recorded on this site. All issues are resolved on the spot in a working order.

6.2 Opportunity for improvement

128. At the moment, no such areas have been identified yet for this reporting period.

VII. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

129. The following activities can be noted as effective protective measures on the project:
130. All emissions into the atmosphere were within acceptable limits. Instrumental measurements did not show the excess of permissible norms.
131. The Contractor environmental specialist independently conducts internal audits and issues instructions to his divisions to eliminate inconsistencies and violations.
132. The analysis of the work done by the environmentalists of both Contractors to bring them into compliance with the standards, rules, and requirements of environmental protection activities is generally assessed as satisfactory.
133. The work was carried out in accordance with the EMP. Detailed information is provided in the table below.

7.2 Recommendations

134. It is recommended to follow existing safeguard processes with an emphasis on compliance and proactively identifying and remediating risks.
135. The corrective action plan for the next six-month period is presented in the table below.

Table 26. Corrective Action Plan for July-December 2021


Issues	Required Action	Responsibility	Timing (Target Dates)
1. Some workers do not have adequate personal protective equipment (PPE) for health and safety.	Ensure adequate health and safety. Personal Protective Equipment (PPE) is provided and used by all workers.	Lot 1 Contractor	30.09.2021
2. Environmental permits for borrow pits, for the construction of the base have not been received	obtain permits for environment emissions	Lot 1 Contractor	30.10.2021
3. No contracts have been concluded for the removal of waste or treatment water	conclude an agreement for the removal of waste, fine waters	Lot 1 Contractor	30.09.2021
4. Permits for water use have not been received	obtain a permit for water use	Lot 1 Contractor	30.10.2021
5. There is no environmental specialist on site	hire a qualified environmentalist on a permanent basis	Lot1 Contractor	30.10.2021

6. No labelled containers for domestic wastes, for hazardous and non-hazardous waste	determine a place for temporary storage of waste, install labelled containers	Lot 2 Contractor	30.09.2021
7. The monitoring progress reports of Contractors and ES of CSC should be improved and contain more details, photo evidences on environmental issues as per SSEMP/EMP	<p>Conduct separate training on environmental monthly reports of Contractors</p> <p>Contractor to submit improved monthly reports with photo evidences on environmental issues as per requirements of EMP/SSEMP</p>	<p>ES of Kazavtozhol, ES of CSC</p> <p>ESs of Lot 1 and Lot 2 Contractors</p>	by 31.12.2021

Annex 1. Examples of laboratory measurements protocols for air, water samples, noise and vibration measurements

 KZ.T.05.1400 Испытательная лаборатория «ГидроЭкоРесурс-Л» Аккредитация № KZ.T.05.1400 от 29 июля 2020 г. Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488, телефон 8 (7132) 53-24-50, 53-13-60	Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л» Аккредитация № KZ.T.05.1400 от 29 июля 2020 г. Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488, телефон 8 (7132) 53-24-50, 53-13-60																		
	ПРОТОКОЛ ИСПЫТАНИЙ №81 от «13» мая 2021 г.																		
Наименование и адрес заказчика: <u>ТОО «АССАНА-ДорСтрой»</u> Место отбора: <u>Автомобильная дорога Актобе-Астрахань км 52-100 (2 точки)</u> Акт отбора проб: <u>№70</u> НД на отбор образцов: <u>ГОСТ 17.2.3.01-86</u> Количество образцов: <u>2</u> Дата поступления образцов: <u>13.05.2021 г.</u> Дата проведения испытаний: <u>13.05.2021 г.</u> Обозначение НД на объект испытания: <u>ГН приказ №168 от 28.02.2015 г.</u> Вид испытаний: <u>наблюдательный</u> Средства измерения, применяемые при испытании, сведения о поверке: <u>ГАНК-4, поверка № ВА09-19-2905, от 25.01.2021 г.</u> Условия проведения испытаний: <u>температура +27 °С; влажность 19 %; давление 751 мм рт. ст.</u> Результаты испытаний:																			
<table border="1"> <thead> <tr> <th rowspan="2">Наименование показателей</th> <th rowspan="2">НД на методы испытаний</th> <th rowspan="2">Норма по НД мг/м3</th> <th colspan="2">Фактически полученные данные мг/м3</th> </tr> <tr> <th>№1-начало дороги</th> <th>№2-конец дороги</th> </tr> <tr> <th>01</th> <th>02</th> <th>03</th> <th>04</th> <th>05</th> </tr> </thead> <tbody> <tr> <td>Пыль (70%>SiO₂>20%)</td> <td>МВИ-4215-006-56591409-2009</td> <td>0,3</td> <td>0,0179</td> <td>0,0188</td> </tr> </tbody> </table>	Наименование показателей	НД на методы испытаний	Норма по НД мг/м3	Фактически полученные данные мг/м3		№1-начало дороги	№2-конец дороги	01	02	03	04	05	Пыль (70%>SiO ₂ >20%)	МВИ-4215-006-56591409-2009	0,3	0,0179	0,0188		
Наименование показателей				НД на методы испытаний	Норма по НД мг/м3	Фактически полученные данные мг/м3													
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Исполнитель: <u>Серебаев Б.А.</u> (фамилия, инициалы)	Начальник ИЛ: <u>Бришева Ж.С.</u> (фамилия, инициалы)																		
Протокол распространяется только на образцы, подвергнутый испытаниям. Частичная перепечатка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена																			

Отчет по производственному мониторингу ООС

 KZ.T.05.1400	Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л» Аттестат аккредитации № KZ.T.05.1400 от 29 июля 2020 г. Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488. телефон 8 (7132) 53-24-50, 53-13-60
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ПРОТОКОЛ ИСПЫТАНИЙ №82

атмосферного воздуха населенных мест, санитарной зоны, селитебной территории.

от «13» мая 2021 г.

Наименование и адрес заказчика: ТОО «АССАНА-ДорСтрой»

Место отбора: Временная производственная база (2 точки - наветренная и подветренная)

Акт отбора проб: №70

НД на отбор образцов: ГОСТ 17.2.3.01-86

Количество образцов: 2

Дата поступления образцов: 13.05.2021 г.

Дата проведения испытаний: 13.05.2021 г.

Обозначение НД на объект испытания: ГН приказ №168 от 28.02.2015 г.

Вид испытаний: наблюдательный

Средства измерения, применяемые при испытании, сведения о поверке: ГАНК-4, поверка № ВА09-19-2905, от 25.01.2021 г.

Условия проведения испытаний: температура +27 °С; влажность 19 %; давление 751 мм рт.ст.

Результаты испытаний:

Наименование показателей	НД на методы испытаний	Норма по НД мг/м3	Фактически полученные данные мг/м3	
			Наветренная	Подветренная
01	02	03	04	05
Диоксид азота	МВИ-4215-002-56591409-2009	0,2	0,0088	0,0085
Оксид азота		0,4	0,0063	0,0072
Диоксид серы		0,5	н/о	н/о
Оксид углерода	МВИ-4215-005-56591409-2009	5,0	0,108	0,117
Углеводороды C12-C19		1,0	0,143	0,150
Пыль (70%>SiO ₂ >20%)	МВИ-4215-006-56591409-2009	0,3	0,0172	0,0195
Сажа (углерод)		0,15	0,0110	0,0113

Исполнитель:

Начальник ИЛ:


Серебаев Б.А.

(фамилия, инициалы)

Бришева Ж. С.

(фамилия, инициалы)

Протокол распространяется только на образцы, подвергнутый испытаниям.
 Частичная перепечатка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена



KZ.T.05.1400

Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л»
Аттестат аккредитации № KZ.T.05.1400 от 29 июля 2020 г.
Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488,
телефон 8 (7132) 53-24-50, 53-13-60

№ 1400

«ГидроЭкоРесурс-Л»

ИСПЫТАТЕЛЬНАЯ ЛАБОРАТОРИЯ

ПРОТОКОЛ ИСПЫТАНИЙ №83

атмосферного воздуха населенных мест, санитарной зоны, селитебной территории.

от «13» мая 2021 г.

Наименование и адрес заказчика: ТОО «АССАНА-ДорСтрой»

Место отбора: Асфальтобетонный завод BENNINGHOVEN MBA 2000 (4 точки – по сторонам света)

Акт отбора проб: №70

НД на отбор образцов: ГОСТ 17.2.3.01-86

Количество образцов: 4

Дата поступления образцов: 13.05.2021 г.

Дата проведения испытаний: 13.05.2021 г.

Обозначение НД на объект испытаний: ГН приказ №168 от 28.02.2015 г.

Вид испытаний: наблюдательный

Средства измерения, применяемые при испытании, сведения о поверке: ГАНК-4, поверка № ВА09-19-2905, от 25.01.2021 г.

Условия проведения испытаний: температура +27 °С; влажность 19 %; давление 751 мм рт.ст.

Результаты испытаний:


Наименование показателей	НД на методы испытаний	Норма по НД мг/м3	Фактически полученные данные мг/м3			
			№1	№2	№3	№4
01	02	03	04	05	06	07
			(север)	(юг)	(запад)	(восток)
Диоксид азота	МВИ-4215-002-56591409-2009	0,2	0,0055	0,0057	0,0064	0,0067
Оксид азота		0,4	0,0039	0,0045	0,0038	0,0043
Диоксид серы		0,5	н/о	н/о	н/о	н/о
Оксид углерода	МВИ-4215-005-56591409-2009	5,0	0,069	0,067	0,070	0,073
Углеводороды C12-C19		1,0	0,163	0,165	0,172	0,179
Пыль (70%>SiO ₂ >20%)	МВИ-4215-006-56591409-2009	0,3	0,0148	0,0156	0,0161	0,0165
Сажа (углерод)		0,15	0,0125	0,0132	0,0136	0,0140

Исполнитель _____

Начальник ИЛ _____

Серебаев Б. А.
(фамилия, инициалы)


Бришева Ж. С.
(фамилия, инициалы)



Протокол распространяется только на образцы, подвергнутый испытанием.
Частичная перепечатка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена

стр. 1 из 1

Отчет по производственному мониторингу ООС

 KZ.H.05.1400	Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л» Аттестат аккредитации № KZ.H.05.1400 от 29 июля 2020 г. Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488, телефон 8 (7132) 53-24-50, 53-13-60
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ПРОТОКОЛ ИСПЫТАНИЙ №698

Вода природная (подземная)

от «20» мая 2021 г.

Наименование и адрес заказчика: ТОО «АССАНА – ДорСтрой»

Место отбора: река Табантал, 2 точки (с двух сторон моста)

Акт отбора проб: №70

НД на отбор образцов: СТ РК ГОСТ Р 51592-03

Количество образцов: 2

Дата поступления образцов: 13.05.2021 г.

Дата проведения испытаний: 14.05.2021 г.

Обозначение НД на объект испытания: СП №209 от 16.03.2015г.

Вид испытаний: химический

Условия проведения испытаний: температура +27 °С, влажность 19 %, давление 751 мм рт.ст.

Результаты испытаний:

Наименование показателей	НД на методы испытаний	Норма по НД мг/дм ³	Фактически полученные данные мг/дм ³	
			04	
01	02	03	№1	№2
Нерастворимые в воде вещества (взвешенные частицы)	ГОСТ 26449.1-85	не норм/ся	0,102	0,99
Хлориды	ГОСТ 26449.1-85	не более 350	128,2	131,8
Сульфаты	ГОСТ 26449.1-85	не более 500	306,0	298,4
Нитраты	ГОСТ 33045-2014	не более 45	13,9	16,0
Нитриты	ГОСТ 33045-2014	не более 3,3	1,01	0,98
Аммиак (азот аммонийный)	ГОСТ 33045-2014	не более 2,0	0,76	0,88
Нефтепродукты (суммарно)	ПНД Ф 14.1:2:4.128-98	Не более 0,1	0,021	0,033
БПК-5	СТ РК ИСО 5815-2-2010	3-6	4,0	4,1
ХПК	СТ РК 1322-2005	15-30	17,4	17,7

Исполнитель:  **Сагын Т.Н.**
 (фамилия, инициалы)

Начальник ИЛ:  **Бришчева Ж.С.**
 (фамилия, инициалы)

Протокол распространяется только на образцы, подвергнутый испытаниям.
 Частичная переписка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена

стр. 1 из 1

Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л»
Аттестат аккредитации № KZ.T.05.1400 от 29 июля 2020 г.
Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488,
телефон 8 (7132) 53-24-50, 53-13-60

ПРОТОКОЛ ИСПЫТАНИЙ №12
ШУМ
от «13» мая 2021 г.

Исполнитель: **ТОО «АССАНА-ДорСтрой»**
Наименование объекта (точки замера): Асфальтобетонный завод BENNINGHOVEN MBA 2000
Дата проведения измерения: 13.05.2021 г.
Обозначение НД на объект испытания: «Об утверждении Гигиенических нормативов, фактическим факторам, оказывающим воздействие на человека» приказ МНЭ РК от 28 февраля 2015 года № 169
Вид испытаний: наблюдательные
Средства измерения, применяемые при испытании, сведения о поверке: Ассистент поверки №ВА16-05-08131, от 24.01.2020 г.
Условия проведения испытаний: Температура: +27 °С; Относительная влажность воздуха 19 %; Скорость движения воздуха 3 м/с

Регистрационный номер	Номер точки по плану	Место замера (указать марку, тип, паспортные данные оборудования)	Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Характер шума						Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц																Уровень шума LA (эквивалентный уровень шума) / Максимальный уровень шума LA, дБА	Допустимый уровень шума LA по норме / Максимальный допустимый уровень шума LA, дБА
				По спектру						По временным характеристикам																	
				Широкополосный	Тонкий	Постоянный	Коллеблющийся	Прерывистый	Импульсный	1	2	4	8	16	31,5	63	125	250	500	1000	2000	4000	8000				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
1		Точка 1			+			+							64,3	63,6	64,05	61,8	60,7	60,1	59,0	57,05	56,9	60,83	80		
2		Точка 2			+			+							63,01	62,0	61,9	60,04	59,8	58,7	57,0	55,9	55,5	59,32	80		

Исполнитель: **Серебрен Б.А.** (подпись, печать)
Начальник: **Бришва Ж.С.** (подпись, печать)

Протокол распространяется только на образцы, подвергнутые испытанию
Частичная переписка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена

ТОО «ГидроЭкоРесурс-Л»

46

Отчет по производственному мониторингу ООС

Испытательная лаборатория ТОО «ГидроЭкоРесурс-Л»
Аттестат аккредитации № KZ.T.05.1400 от 29 июля 2020 г.
Фактический адрес: Республика Казахстан, г. Актобе, Промзона уч.488,
телефон 8 (7132) 53-24-50, 53-13-60

ПРОТОКОЛ ИСПЫТАНИЙ №11
ШУМ
от «13» мая 2021 г.

Исполнитель: **ТОО «АССАНА-ДорСтрой»**
Наименование объекта (точки замера): Участок автодороги Актобе-Атырау (км 52-100)
Дата проведения измерения: 13.05.2021 г.
Обозначение НД на объект испытания: «Об утверждении Гигиенических нормативов, фактическим факторам, оказывающим воздействие на человека» приказ МНЭ РК от 28 февраля 2015 года № 169
Вид испытаний: наблюдательные
Средства измерения, применяемые при испытании, сведения о поверке: Ассистент поверки №ВА16-05-08131, от 24.01.2020 г.
Условия проведения испытаний: Температура: +27 °С; Относительная влажность воздуха 19 %; Скорость движения воздуха 3 м/с

Регистрационный номер	Номер точки по плану	Место замера (указать марку, тип, паспортные данные оборудования)	Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Характер шума						Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц																Уровень шума LA (эквивалентный уровень шума) / Максимальный уровень шума LA, дБА	Допустимый уровень шума LA по норме / Максимальный допустимый уровень шума LA, дБА
				По спектру						По временным характеристикам																	
				Широкополосный	Тонкий	Постоянный	Коллеблющийся	Прерывистый	Импульсный	1	2	4	8	16	31,5	63	125	250	500	1000	2000	4000	8000				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
1		км 52			+			+							60,9	61,01	60,7	59,5	58,7	57,6	56,01	55,05	55,1	58,3	80		
2		км 100			+			+							67,05	66,0	65,7	63,9	62,7	62,4	60,0	59,04	58,8	62,8	80		



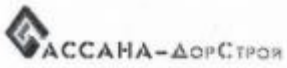


Исполнитель: **Серебрен Б.А.** (подпись, печать)
Начальник: **Бришва Ж.С.** (подпись, печать)





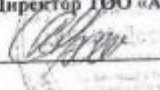
Протокол распространяется только на образцы, подвергнутые испытанию
Частичная переписка протокола без разрешения ИЛ «ГидроЭкоРесурс-Л» запрещена




ТОО «ГидроЭкоРесурс-Л»

4

Annex 2. Environmental monitoring reports (1st pages copy)

					
To: Director ARB JSC "NC "KazAvtoZhol" Mr. Makhambetov M.S. Mr. Jeong, Rolk In Engineer DONSUNG Engineering Co, Ltd		Кому: Директору АОФ АО «НК «КазАвтоЖол» Махамбетову М.С. Г-ну Чонг, Рок Ин Инженеру DONGSUNG Engineering Co, Ltd			
Ref. No.: 2021-53 Date: 21.04.2021		Исх.№: 2021-53 Дата: 21.04.2021			
Project: Construction works by Contract AKRP/CW/LCB-01/Lot-02 (km 52-100) Loan 52286-KAZ: Central Asia Regional Economic Cooperation Corridors 1 and 6 Connector Road (Aktobe-Kandyagash) Reconstruction Project Reconstruction of the Road of Republican Importance A-27 "Aktobe-Atyrau-the border of the Russian Federation (to Astrakhan)" km 52-100"		Проект: Строительные работы по Контракту AKRP/CW/LCB-01/Lot-02 (km 52-100) Займ 52286-КАЗ: Проект реконструкции дороги (Актобе-Кандыагаш), соединяющей коридоры 1 и 6 ЦАРЭС, Проект Реконструкции дороги республиканского значения А27 «Актобе-Атырау-гр.РФ (на Астрахань)» км 52-100»			
Subject: <u>Plan and Report for approval</u>		Тема: <u>План и Отчет на согласование</u>			
Please, find attached the Environmental Management Plan and the Industrial Monitoring Report upon the Road reconstruction project (Aktobe-Kandyagash) for the month of March.		Направляем Вам на согласование план управления окружающей средой и отчет по производственному мониторингу за март месяц по проекту реконструкции дороги (Актобе-Кандыагаш)			
Appendix: Plan and Report		Приложения: План и Отчет			
e-mail: aaa52-100@mail.ru		e-mail: aaa52-100@mail.ru			
Best regards, Representative Assana DorStroy LLP Director  V.V. Drachsh BIR 13040016157		С уважением, Представитель Директор ТОО «АССАНА-ДорСтрой»  V.V. Drachsh BIR 13040016157			

 АҚЖОЛ ҚҰРЫЛЫС		 AzVirt		 АССАНА-ДОРСТРОЙ	
To:	Mr. Jeong, Roik In Engineer DONSUNG Engineering Co, Ltd	Кому:	Г-ну Чонг, Рак Ин Инженеру DONGSUNG Engineering Co, Ltd		
Copy:	Director ARB JSC "NC "KazAvtoZhol" Mr. Makhambetov M.S.	Копия:	Директору АОФ АО «НК «КазАвтоЖол» Махамбетову М.С.		
Ref. No.:	2021-64	Исх. №:	2021-64		
Date:	05.05.2021	Дата:	05.05.2021		
Project:	Construction works by Contract AKRP/CW/LCB-01/Lot-02 (km 52-100) Loan 52286-KAZ: Central Asia Regional Economic Cooperation Corridors 1 and 6 Connector Road (Aktobe-Kandyagash) Reconstruction Project Reconstruction of the Road of Republican Importance A-27 "Aktobe-Atyrau-the border of the Russian Federation (to Astrakhan)" km 52-100"	Проект:	Строительные работы по Контракту AKRP/CW/LCB-01/Lot-02 (km 52-100) Заём 52286-КАЗ: Проект реконструкции дороги (Актобе-Кандыагаш), соединяющей коридоры 1 и 6 ЦАРЭС. Проект Реконструкция дороги республиканского значения А27 «Актобе-Атырау-гр. РФ (на Астрахань)» км 52-100»		
Subject:	<u>Report for approval</u>	Тема:	<u>Отчет на согласование</u>		
Please, find attached the Industrial Ecological Monitoring Report upon the Road reconstruction project (Aktobe-Kandyagash) for the month of April.		Направляем Вам на согласование Отчет по производственному экологическому мониторингу за апрель месяц по проекту реконструкции дороги (Актобе-Кандыагаш)			
Appendix: Report		Приложение: Отчет			
e-mail: aaa52-100@mail.ru		e-mail: aaa52-100@mail.ru			
Best regards,		С уважением,			
Representative Assana DorStroy LLP Director  Drachsh V.V.		Представитель Директор ТОО «АССАНА-ДорСтрой»  В.В. Драш			

		
To: Mr. Jeong, Rolk In Engineer DONSUNG Engineering Co, Ltd	Кому: Г-ну Чонг, Рок Ин Инженеру DONGSUNG Engineering Co, Ltd	
Copy: Director ARB JSC "NC "KazAvtoZhol" Mr. Makhambetov M.S.	Копия: Директору АОФ АО «НК «КазАвтоЖол» Махамбетову М.С.	
Ref. No.: 2021-86 Date: 24.05.2021	Исх.№: 2021-86 Дата: 24.05.2021	
Project: Construction works by Contract AKRP/CW/LCB-01/Lot-02 (km 52-100) Loan 52286-KAZ: Central Asia Regional Economic Cooperation Corridors 1 and 6 Connector Road (Aktobe-Kandyagash) Reconstruction Project Reconstruction of the Road of Republican Importance A-27 "Aktobe-Atyrau-the border of the Russian Federation (to Astrakhan)" km 52-100"	Проект: Строительные работы по Контракту AKRP/CW/LCB-01/Lot-02 (km 52-100) Заём 52286-КАЗ: Проект реконструкции дороги (Актобе-Кандыагаш), соединяющей коридоры 1 и 6 ЦАРЭС, Проект Реконструкция дороги республиканского значения А27 «Актобе-Атырау-гр.РФ (на Астрахань)» км 52-100»	
Subject: <u>Report for approval</u>	Тема: <u>Отчет на согласование</u>	
Please, find attached the Industrial Ecological Monitoring Report upon the Road reconstruction project (Aktobe-Kandyagash) for the month of May.	Направляем Вам на согласование Отчет по производственному экологическому мониторингу за май месяц по проекту реконструкции дороги (Актобе-Кандыагаш)	
Appendix: Report	Приложение: Отчет	
e-mail: aaa52-100@mail.ru	e-mail: aaa52-100@mail.ru	
Best regards,	С уважением,	
Representative Assana DorStroy LLP Director _____ Drachsh V.V.	Представитель Директор ТОО «АССАНА-ДорСтрой» _____ В.В. Дряш	

Annex 3. Sampling control points schemes - Lot 1



Annex 4. Sampling control points schemes - Lot 2

