

Environmental Monitoring Report

Project Number: 48424-002
March 2021

Kazakhstan: CAREC Corridors 1 and 6 Connector Road (Aktobe–Makat) Reconstruction Project

Prepared by the Dongsung Engineering Co., Ltd in association with subconsultant Zhol-Sapa LLP for the Ministry of Investments and Development, Republic of Kazakhstan and the Asian Development Bank.

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Environmental Monitoring Report

Project No.: L3416-KAZ

Reporting Period: July-December 2020

REPUBLIC OF KAZAKHSTAN: CAREC CORRIDORS 1 AND 6 CONNECTOR “AKTOBE-MAKAT” ROAD RECONSTRUCTION PROJECT (SECTION KM160-330)

Funded by ASIAN DEVELOPMENT BANK

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and Infrastructure Development of the Republic of Kazakhstan and the Asian Development Bank

Approved by: PMC JSC “NC “KazAvtoZhol”
(PMC employee name) and signature, report submission date

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ABBREVIATIONS

ADB – Asian Development Bank

AP DIA – Administrative Police of Department of Internal Affairs

RTS – Road Traffic Safety

FL – Fuel and lubricants

SHS – Sanitary-Hygienic Standard

RMD - Road Maintenance Depot

CfR – Committee for Roads

KAZh - “NC “KazAvtoZhol” JSC

PMC - Project Manager Consultant

CSC - Construction Supervision Consultant

COVID-19 - Coronaviral infection 2019-nCoV

MIID – Ministry of Industry and Infrastructure Development

RD - Regulatory Document

GCC - General Contract Conditions

EMP- Environmental monitoring programme

EMP– Environmental monitoring plan

PEM – Production Ecology Monitoring (carried out by an accredited laboratory)

EMP – Environmental Management Plan

SSEMP – Site-Specific Environmental Management Plan

SHB – Safety and Health Plan

ACL- Admissible Concentration Limit

MPL – Maximum Permissible Level

ALV - Admissible Limit Value

SAEMR - Semi-Annual Environmental Monitoring Report

RK– Republic of Kazakhstan

RSE - Republic State Enterprise

SPZ - Sanitary Protection Zone

SZ - Settlement Zone

MSW - Municipal Solid Waste

HS - Health and Safety

CAREC- Central Asian Regional Economic Cooperation

1 INTRODUCTION

1.1 Preamble

1. This report is a semi-annual review of environmental monitoring under CAREC corridors 1 and 6 connector “Aktobe-Makat” road reconstruction project (section 160-330, Lot 1-3). The report for the second half of 2020 is the sixth report from the beginning of the project.

1.2 Key information

2. In accordance with the Decree of the Government of the Republic of Kazakhstan No. 131 dated March 19, 2019 “On the reorganization of some republican state institutions”, the RSE was established under the right of economic management of the “National Center for Quality of Road Assets” COR MIID. The main activities of this structure are the examination of the work and materials quality during construction, reconstruction, repair and maintenance of roads, as well as the management of road assets.
3. COR MIID assigns NC KazAvtoZhol JSC, which is the National Highway Operator, to serve as the Employer's Personal functions since 11.04.2019 on road projects, replacing the previously performed this function of RSE “ZholLaboratory”
4. Due to the significant impact of the Covid 19 pandemic on all aspects of the project's activities: from supply (resources, spare parts for machinery and equipment, materials, services, etc.) to direct work on the site (restrictive measures in all areas of human activity) have affected the rate of works on Lot1, Lot 2 and Lot3.
5. On Lot 1, the Client approved the EOT (Extension of Time) 236 days subjected COVID-19 pandemic, resulted in the completion date changed from 25.09.2020 to 19.05.2021.
6. On Lot 2, from the first half of 2019, there were work delays, which, as a result of measures taken by the Client (conclusion of an additional agreement of 04/29/2019), allowed the Contractor to implement capacity development measures. The Contractor has demonstrated certain performance indicators that show a reduction in the planned works delays on the project. This acceleration of work was also subsequently in the second half of 2019. However, due to additional work given and the delay of local authority's permission (railway company), the first EOT (Extension of Time) 206 days was given to the Contractor, resulted in the completion date was changed from 27.01.2020 to 20.08.2020. Since the COVID-19 pandemic situation get serious, specifically from March 2020 to August 2020, the quarantine measures introduced in the region negatively affected the work rate on Lot 2 site and led to a situation where construction work was suspended in August 2020 due to the contractor's financial situation associated with problems. The Contractor is currently made significant efforts to resume the works, but site and production site monitoring has shown that work has been suspended until end of 2020. In August 2020, the Client tentatively extended the completion date for Lot 2 until 07.11.2020.
7. On Lot 3, the Client approved the EOT (Extension of Time) 271 days subjected COVID-19 pandemic, resulted in the completion date changed from 20.09.2020 to 18.06.2021.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

8. Aktobe-Makat road is a two-lane road of republican significance and was built in 1970-1980. The length of the section is 459 km, basically road has category III/IV, and passes through the territory of Aktobe and Atyrau regions. A complete reconstruction of the pavement with the strengthening of its structure will reduce travel time on the road, fuel consumption of vehicles and cost of vehicles operation on the road, and also increases transport links and economic development of the region. The road will be reconstructed according to the standards for category II in accordance with the national standards of the Republic of Kazakhstan.

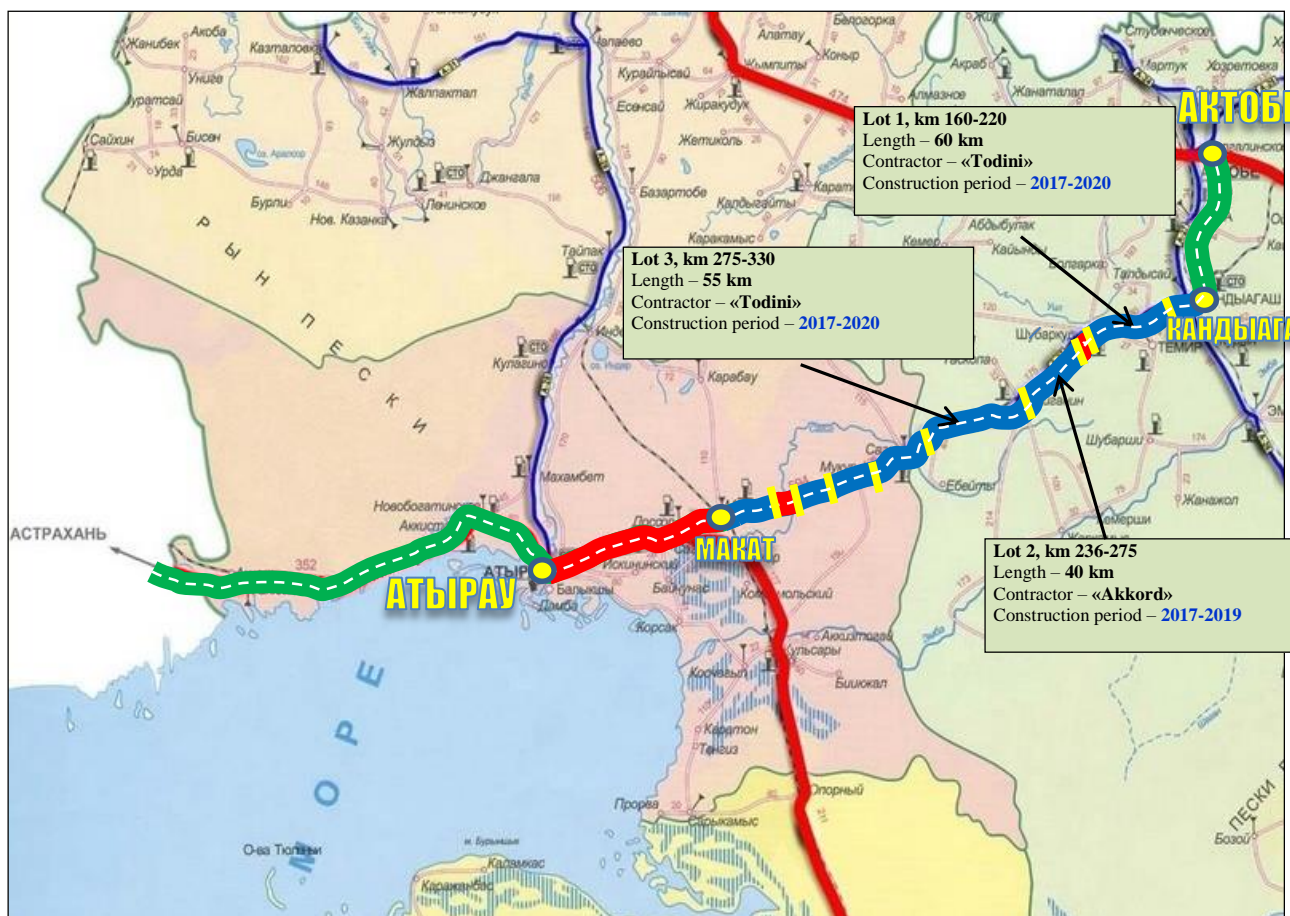


Figure 1. Location of project road

9. The project is financed by the Asian Development Bank (ADB) in the framework of loan 3416. ADB and the Government of the Republic of Kazakhstan jointly finance this project in the ratio of 88% to 12%.
10. The proposed project includes reconstruction of the Aktobe-Makat road section km 160 - km 468, including: (i) km 160 - km 330 in Aktobe region; and (ii) km 330 - km 468 in Atyrau region.
11. The length of this project road subject to upgrade and reconstruction is about 299 km of II technical category with an increased level of safety.
12. The entire Aktobe-Makat section, 299 km long, was divided into 7 lots, each of which implies a separate contract for construction work. The road section is divided into the following lots: Lot 1 (Km 160- Km 220), Lot 2 (Km 236- Km 275), Lot 3 (Km 275-Km 330), Lot 4 (Km 330-Km 370), Lot 5 (Km 370-Km 418), Lot 6 (Km 418 –Km 458) and Lot 7 (Km 487 - Km 504). Information on Lot 1, Lot 2 and Lot 3 is reflected within the framework of the presented report. Lot 4, Lot 5, Lot 6 and Lot 7 information will be reflected in a separate report.

Table№ 1. Main characteristics of the project

Project components	Lot 1	Lot 2	Lot 3
Contractor	JSC "Todini Costruzioni Generali S.p.A." (Italy).	OJSC "ICICAKkord" (Azerbaijan).	JSC "Todini Costruzioni Generali S.p.A." (Italy).
Subcontractor approved by the Engineer	Seni Medas Stroy	-	Seni Medas Stroy
Location	km 160-220	km 236-275	km 275-330
Length	60,8 km	40,1 km	55,0 km
Road category	II категория		
Pavement	Highly Porous Asphalt Concrete Coarse-Grained Porous Asphalt Concrete SMA-20		
Number of lanes	1/1		
Lane width	3,75 meters		
Shoulder width	3,75 meters		
Structures:			
Overpass	-	1	-
RMD	1		1
Bridge	3	1	3
Others:			
Culverts	17	20	18
Box culverts	14	13	4
Rest areas	5	2	4
Bus shelters	6	8	2
Designed standards: Designed speed Width of the right of way	120 km/h 100 METERS		

13. Lot 1: Km160 - km220 (Shubarkuduk - Karaulykeldy villages): This section includes reconstruction of the road from category III to category II with a total length of 60, 833 km and construction of one bypass. A detour of Shubarkuduk (km 172+600 to km 181+100), 8.5 km length, will take place along the new rout. Figure 2 below shows the layout of Lot 1.

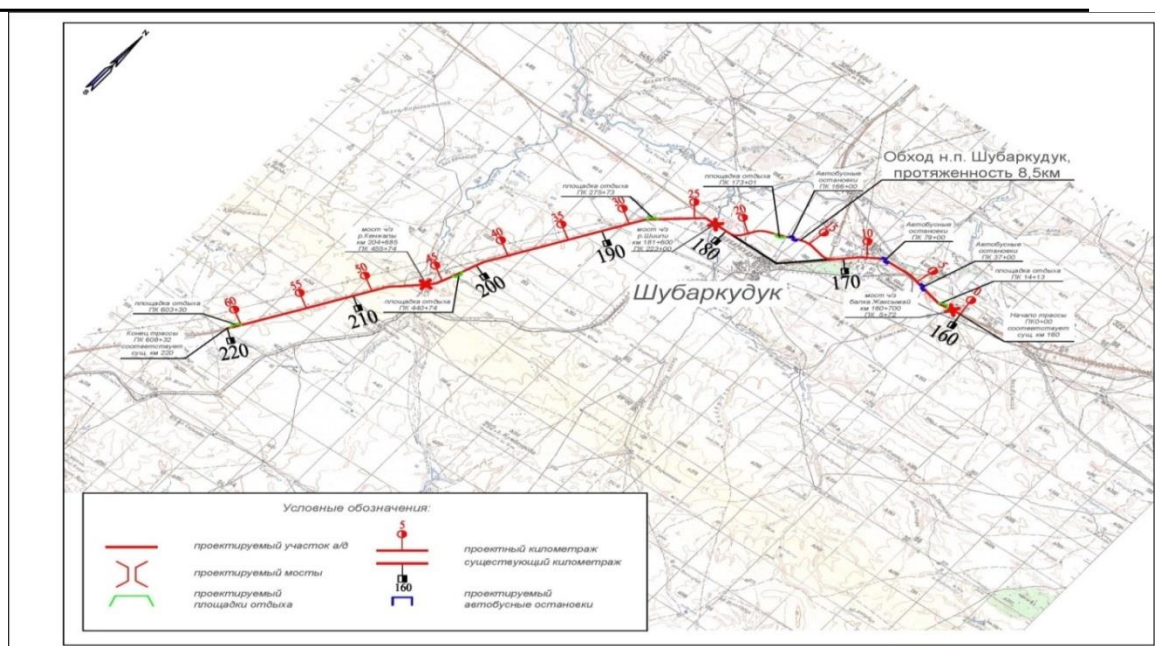


Figure 2. Lot 1 section scheme

14. Lot 2: km 236 - km 275 (Karaulykeldy village): This section includes reconstruction of road from category III to category II with a total length of 39 km and construction of one bypass. The bypass of Karaulykeldi (km 236 to km 247) (11.8 km) will pass along a new road. Other parts of this section, the direction of traffic flow coincide with existing pavement with partial slopes from the embankment in straight and curve area. In this section, the project envisages construction of 1 bridge and 1 overpass. The following Figure 3 shows the scheme of the lot 2.

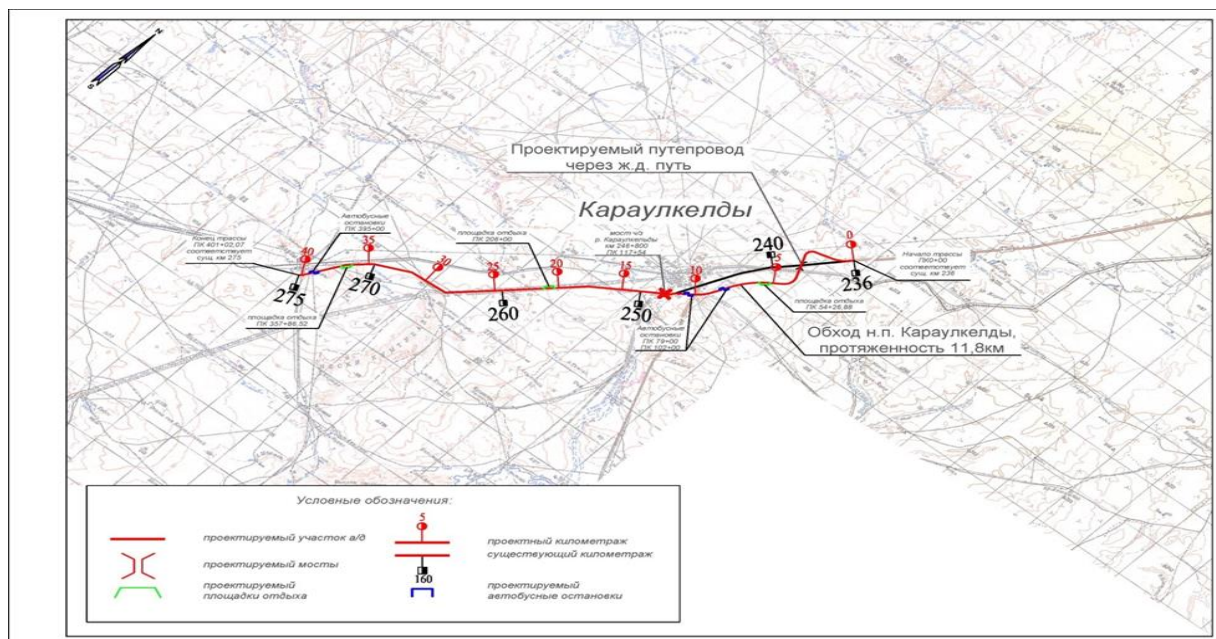


Figure 3. Lot 2 section scheme.

15. Lot 3: km 275 - km 330 (Zharly v. – Nogaity v.): This section includes reconstruction of road from category III to category II with a total length of 55 km. Other parts of this section, the direction of traffic flow coincide with existing pavement with partial slopes from the embankment in straight and curve area. Figure 4 below shows Lot 3 section scheme.

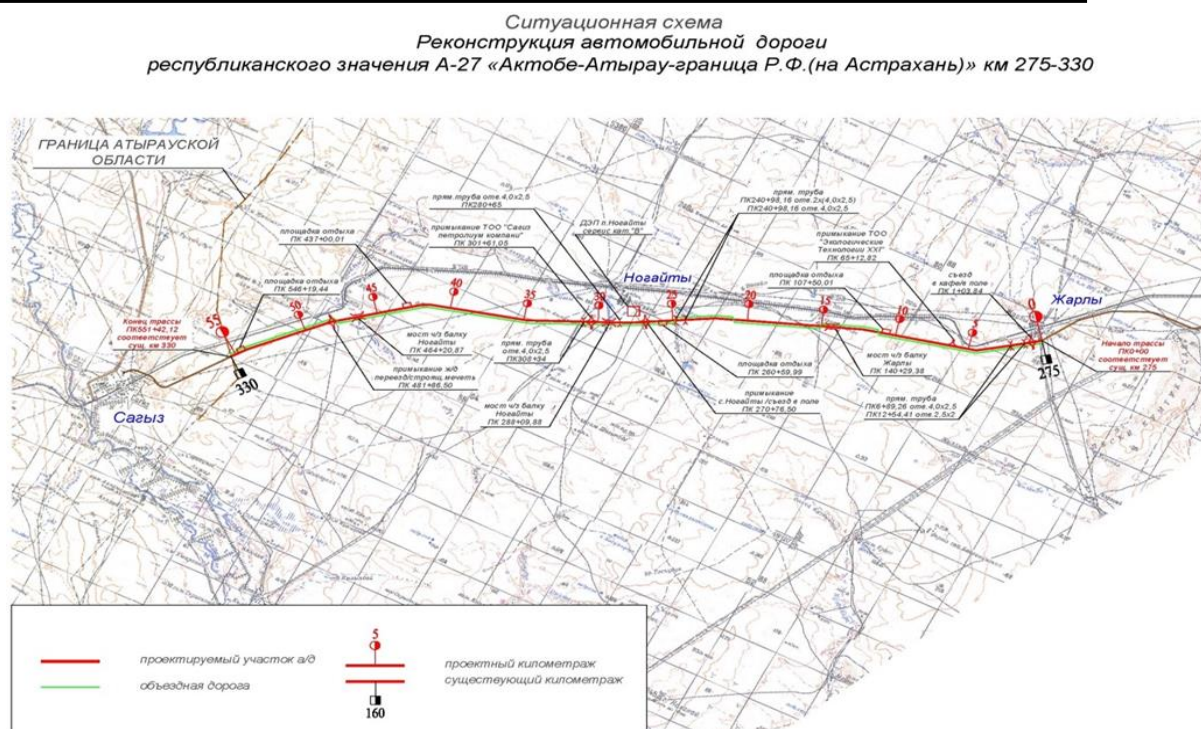


Figure 4. Lot 3 section scheme.

2.2 Agreements (contracts) for project implementation and management

16. COR MID entered into an agreement for services with KazAvtoZhol JSC (KAZH) for the provision of 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 Project. The responsible officer for environmental protection and protective measures conducts audits, inspections of the site, interacts with protective measures specialist of the CSC for effective project management in terms of environmental management plans implementation.
17. By the Decree of the President of the Republic of Kazakhstan dated December 26, 2018 No. 806 “On measures of further improvement of public administration system of the Republic of Kazakhstan” in order to increase the efficiency of the public administration system, the Ministry of Investment and Development of the Republic of Kazakhstan was reorganized by transforming it into the Ministry of Industry and Infrastructure Development of the Republic Kazakhstan with the transfer of functions and powers: to the Ministry of National Economy of the Republic of Kazakhstan in the field of formation of the state policy for investment incentives and the Ministry of Foreign Affairs of the Republic of Kazakhstan in the implementation of state policy on investment attraction.
18. Regional representative from the Employer on the site is the Aktobe Branch of JSC “NC “KazAvtoZhol” A list of the main organizations included in the project and related to protective measures for environmental protection (Environmental Safeguards) is presented below in Table 1.

**Table 2. List of organizations and contacts of experts related to the project
 Environmental Protection Measures**

Organization	Representative	Contact data
ADB HQ Project department/group	Armine Yedigaryan	ayedigaryan@adb.org
ADB office in RK	ADB RETA Consultant Malika Babadzhanova	mbabadjanova1.consultant@adb.org
Committee of Roads	Ruslan Kusainov	Nur-Sultan 010000/ Transport tower/ Kabanbai Batyr st. 32/1 8 778 668 70 06 r.kusainov@mid.gov.kz
Aktobe branch of JSC "NC "KazAvtoZhol"	Mahambetov Marat Branch director	Aktobe, Maresieva st. 89, room No. 301 +7 701 566 31 44 aktobekrti@mail.ru
PMC JSC "NC" KazAvtoZhol"	Zeinullina Aliya Amantaevna Social and safeguards measures specialist	+ 7 701 982 66 57 a.zeinullina@kazautozhol.kz
CSC DONGSUNG ENGINEERING CJ., LTD/ LLP "ZS ENGINEERING "	Imbarova Sara Environmental and safeguards measures specialist	+7 702 268 98 08 aktobe_kns1@mail.ru
JSC "Todini Kostruktzioni Generali S. p. A." (Italy) for lot 1 and lot 3	Urais Hasan Environmental specialist Nugymanov Amanserik - Lot 1 HSE Specialist Igemberdiev Yuldash Lot 3 HSE Specialist	8 701 956 59 86 todini_aktobe@todini.it +7 747 792 56 05 +7 777 124 46 66
OJSC "ICIC Akkord" (Azerbaijan) for lot 2	Anuar Embergenov Environmental engineer Askarov Edil Health and safety specialist	Aktobe region Bayganin district Karaulkeldy village, Kozhabay Zhazykov St., 2 A +7 701 484 08 68 +7 701 082 71 73

19. The project is divided into 3 sections. Lot 1 (Km 160-220) and Lot 3 (Km 275 - 330) were awarded to the Contractor JSC "Todini Costruzioni Generali S.p.A." (Italy). Lot 2 (Km 236-275) was awarded to the OJSC "ICIC Akkord" (Azerbaijan).

Table 3. Information about Contractors contracts

Contractors name	Contract No.	Section (km)	Length (km)	Contract Signing Date	Work commencement date	Completion date
JSC “Todini Costruzioni Generali S.p.A.” (Italy)	№ 001-ADB/CW-2017	160-220	60	07.09.2017	28.11.2018	19.05.2021 (1268 days)
OJSC “ICIC Akkord” (Azerbaijan)	№ 002-ADB/CW-2017	236 -275	39	16.08.2017	28.11.2017	07.11.2021 (1074 days)
JSC “Todini Costruzioni Generali S.p.A.” (Italy)	№ 003-ADB/CW-2017	275-330	55	07.09.2017	28.11.2018	18.06.2021 (1298 days)

20. The Figure 5 below shows the organization chart of interaction between the structures of the Project

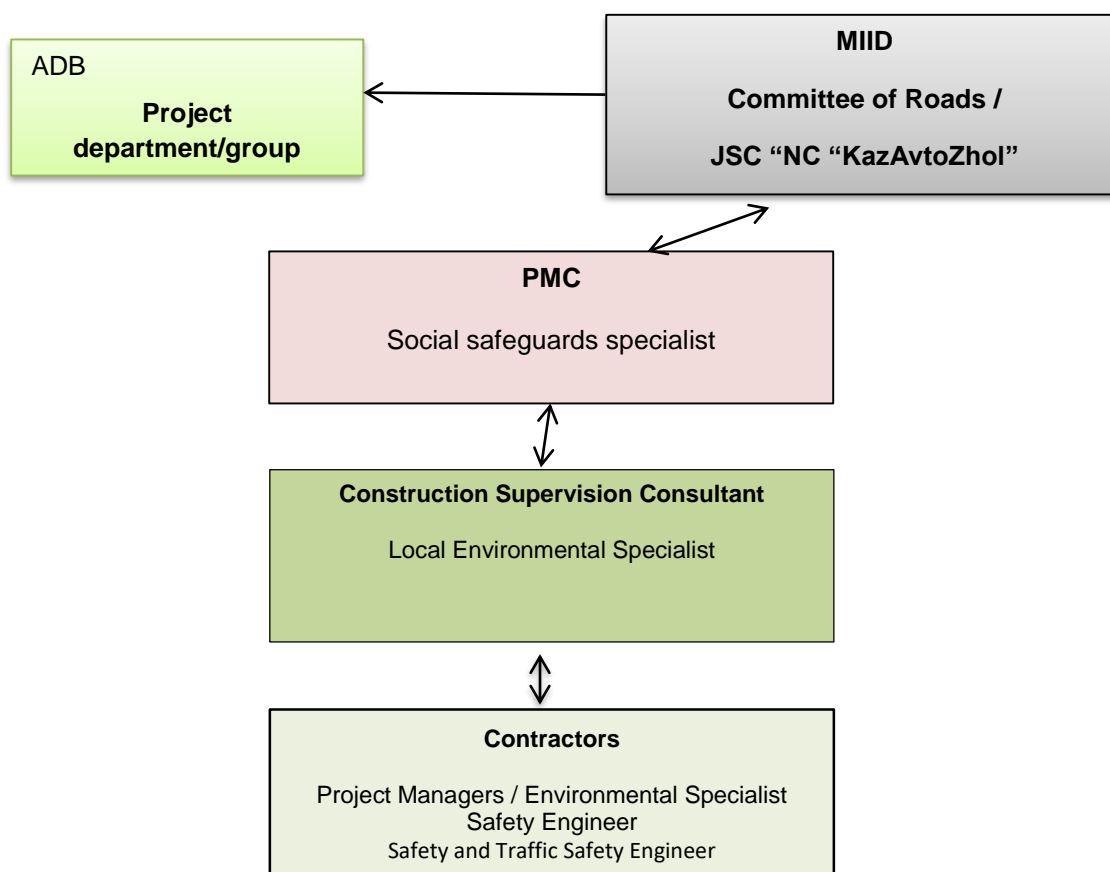


Figure 5. Organization chart of project coordination

2.3 Project Activities during Current Reporting Period

21. The following types of work were performed on Lot 1 during the reporting period: the passage of vehicles is open from 06.11.2020. Bypass road on PK0+00 - 82+00, PK 83+00+00 - 130+00, PK 208+00 -376+00, PK 376+00-424+87, 424+87- 450+00, PK 453+00-458+00, PK 469+00-

471+00, PK 471+00-608+33. Site clearance: 27 pipe culverts are dismantled; the bridges on PK5+41, PK 223+06.16, PK 455+86 are repaired.

22. During the reporting period Lot 1, by status as of December 31, JSC "Todini Costruzioni Generali S.p.A." (Italy) employs 68 people on the project. 7 people perform the works in the subcontracting company. The decrease in the number of personnel involved in the site is associated with the transition to winter road maintenance and the procurement of materials and resources for the start of spring work.
23. Table 4 below provides data on the status of construction work for the reporting period on Lot 1.

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

Contractor & section	type of work	unit	total in the contract	executed in 2017-2019	executed in 2020	% of execution	Balance
Todini lot 1 (km 160 -220)	cost	Mln. tg	11 396,3	8 913,60	1 790,26	79%	21
	Wearing course	Km	60,8	44,075	14,973	100%	-
	Binder course	Km	60,8	50,19	9,59	100%	-
	Base course	Km	60,8	51,020	9,37	100%	-
	additional layer (geotextyle)	Km	60	51,020	9,37	100%	-
	Subgrade	thou m ³	1 789,587	1 773,587	37,48	100%	-
	Culvert	pcs	34	31	1	100%	-
	bridges and overpass	pcs	3	2,10	0,30	99%	0,03
	RMD	pcs	1	0,59	0,01	75%	0,25
	% execution of construction works	%	100	60,30	17,82	89%	11%

24. The following works were executed on the Lot 2 section during reporting period: Dismantling of the existing bridge at PK 117 + 54.00. Milling, scarifying and dismantling of existing pavement and base layers of existing pavement PK118 + 00-PK149 + 20, PK158 + 00-PK225 + 80; PK226 + 20 - PK 232 + 00 PK244 + 00 - PK278 + 20; PK291 + 40 - PK369 + 00; PK369 + 00-PK401 + 02.07. finishing of the earthwork, embankment slopes and excavations, etc. PK186 + 00 - PK 201 + 00; PK201 + 00-PK225 + 60; PK129 + 80-PK186 + 00; PK 73 + 00- PK 74 + 00. PK 261 + 00- PK 312 + 00; PK 312 + 00- PK 345 + 00; PK 230 + 00- PK 261 + 00; PK241 + 00- PK225 + 60; on the overpass at Km 238 + 75 the works were carried out to prepare the surface of the overpass for prime coat.
25. During the reporting period for Lot 2, according to the status as of December 31, there are no Contractor personnel on the site, the construction site is mothballed and there is security.
26. Table 5 below provides data on the status of construction work for the reporting period on Lot 2. Binder course-0,44km, base course -0,54km, subbase-0,72km, geotextile – 0,38 km, earthwork-19,63km, the construction works performance totally is 4,23%.

Table 5. Status of construction work for the reporting period for Lot 2

Contractor: SPIK AKKORD (km 236-275)

type of work	unit	total in the contract	executed in 2017-2019	executed in 2020	% of execution	Balance
cost	mln tg	8 012,31	5 834, 252	338,87	77,05%	22,95%
Binder course	km	40,1	33,04	2,28	88,3%	11,7%
Base course	km	40,1	34,5	1,88	91,0%	9,0%
Subbase	km	40,1	34,89	2,46	93,4%	6,6%
additional layer (Geotextile)	km	40,1	34,95	2,68	94,1%	5,9%
Earthwork	thou m3	1 699,49	1565,75	77,59	97,7%	2,3%
Culvert	pcs	33	33	0,00	100,0%	0,0%
bridges and overpasses	pcs	2	1.78	0,16	96,6%	3,4%
% execution of construction works	%	100	14,68	338,87	77,05%	22,95%

27. For Lot 3, the following types of construction work were carried out: Construction of a temporary bypass road at PK 244 + 00 - 270 + 00 and 230 + 00 - 289 + 00, PK 300 + 00 - 350 + 00, PK 524 + 00 - 551 + 40, PK 290 + 00 - 318 + 00; PK 365 + 00 - 380 + 00; PK318 + 00 - 342 + 20. PK342 + 20 - 370 + 60 PK370 + 60 - 420 + 80; PK496 + 00 -512 + 00; PK420 + 80 - 470 + 00. The main road earthwork arrangement, speed change lanes, roadside berms are arranged, intersections and abutments, bus stops, rest areas from the road and soil reserves at the rest areas at PK 107 + 50 and at PK 260 + 60. For RMD: floor screed, sand warehouse, coal warehouse. Pumping station device, (reinforcement, concreting). Finishing work in the administrative building. On-site engineering networks and structures (external power supply); preparation of an underground reservoir (preparation concrete, reinforcement).
28. By status as of December 31, 12 persons have been mobilized on Lot 3 during the reporting period for 31.12.2020. The subcontractor mobilized 5 people. Reduction of manpower is connected due to the winter period works.
29. Table 6 below provides data on the status of construction work for the reporting period on Lot 3.

Table 6. Status of construction work for the reporting period for Lot 3

Contractor & section	type of work	unit	total in the contract	executed in 2017-2019	executed in 2020	% of execution	Balance
Todini lot 3 (km 275-330)	cost	mln tg	9 878,0	4 623,39	3 293,72	73	27
	Wearing course	Km	55,142	-	11,06	20	80
	Binder course	km	55,142	26,72	28,42	100	-
	Base course	km	55,142	28,58	26,56	100	-
	Subbase		55,142	31,24	23,90	100	-
	additional layer (geotextyle)	km	55,142	33,29	21,85	100	-
	Subgrade	thou m ³	1 293	1247,22	13,4	96,4	3,6
	Culvert	pcs	22	22	0	100	0
	bridges and overpass	pcs	3	2,14	0,50	88	12
	RMD	pcs	1	0,48	24,5	0,51	27,5
	% execution of construction works	%	100	40,2	33	73,2	26,8

30. There is a significant delay from the planned calendar work on all lots. The delay is especially shown on Lot 2 connected in additions to the impact of quarantine restrictions, also with the financial difficulties of the Contractor. One of the reasons is the negative impact of an external factor: the COVID 19 coronavirus pandemic, which has noticeably slowed down the pace of personnel mobilization and provision of the necessary resources. Contractor's management and CSC engineers are taking measures to reduce delays from plans.

2.4. Description of Any Design Changes

31. During the reporting period Lot 1 and Lot 3 did not submit the requests for variation orders.
32. There were no any Variation Orders for Lot 2 during the reporting period. Before agreed changes are in the process of work. The Engineer approved the volume of works for arrangement of temporary bypass road between PK 0+00 and PK 32+33,34. The contractor followed the Engineer's instructions on the necessary approvals and permits from the local authorities. The contractor was compensated for the additional volume of work arising from the need to arrange, maintain and ensure road safety on the additional 3,660 m of the temporary bypass road. The construction of RMD was excluded from the project in 2019 by the decision of the Client.
33. The Contractor completed the construction of an additional temporary bypass road according to the drawings approved by the Engineer, which is confirmed by the request for inspection and the act of works performed. The Engineer, having checked the calculations provided by the Contractor, determined that the extension time for the execution of the Works under the Contract for the type of work on the arrangement, maintenance and safety of road traffic for the additional temporary bypass road is equal to 21 days and instructed the Contractor to prepare an appropriate Variation Order.
34. The contractor also completed the construction of an additional cattle creep. Residents of the village of Karaulykeldy asked for an additional cattle creep that was not provided by the project. The Engineer examined the need for an additional cattle creep at the requested area and

instructed the Contractor to propose a plan for the additional cattle creep construction at PK 106 + 40 in accordance with sub clause 13.1 "Right to Vary" and 13.3 "Variation Procedure" of the GCC to take the final decision by the Client. All volumes of work have been completed; the cattle creep is used by local residents.

2.5. Description of Any Changes in Approved Construction Methods

35. During the reporting period, the following changes were ~~not~~ made. The changes done during previous period have been approved and implemented in the production plans of work in the process of construction works. For Lot 1 and Lot 3, change affected the pavement construction. The contractor used crushed stone and geotextile instead of the designed material. This change was agreed and approved by the Employer and the Engineer. Lot 2, three changes were made during the previous reporting period:

- Due to the fact that soils from borrow pits in this area are not suitable for additional layer stabilization, the Engineer recommended to exclude cement and Roadzyme from the additional base layer.
- Due to the absence of a temporary bypass road in the design documents and drawings, the Engineer agreed for construction within the right-of-way, maintenance and traffic safety of additional 3,660 m of a temporary bypass road according to the EMP of this site. There is no need to plan mitigation measures, since during the inspection of the site for the bypass road in the right-of-way, no new problematic objects and entities, that should be further considered, were identified.
- At the request of local residents, it became necessary to build an additional cattle creep at CH 106+40. The temporary bypass road and cattle creep have been constructed and available to stakeholders.

3. ENVIRONMENTAL PROTECTION ACTIVITIES

3.1 General Description of the Environmental Protection Activity (environmental protective measures)

36. During the reporting period, there were changes in the organizational structure of the Contractor for Lot 1 and Lot 3. An environmental specialist was mobilized to the site since September 2020 with the split shift of work. This work format is associated with the quarantine introduced in the region in accordance with the requirements of the decree of the Chief State Sanitary Doctor of the Republic of Kazakhstan No. 57 dated October 23, 2020. At the same time, at least 50% of employees remain on the remote form of work (with a staffing schedule of more than 30 employees)
37. On site Lot 2 Ecologist Anuar Embergenov continued to work remotely from Aktobe.
38. Following Resolutions were issued, which stipulate restrictions on activities and the need to introduce remote work:
- Resolution of the Chief State Sanitary Doctor of Aktobe region dated 29.08. 2020 No. PGSV-51 "On restrictive quarantine measures and their gradual mitigation in the territory of Aktobe region";
 - Resolution of the Chief State Sanitary Doctor of the Aktobe Region dated September 17, 2020 No. PGSV-53 "On Amendments and Additions to the Resolution of the Chief State Sanitary Doctor of the Aktobe Region dated August 29, 2020 No. PGSV-51" On restrictive quarantine measures and their gradual mitigation for the territory of Aktobe region ".
39. The contractors were unable to ensure continuous monitoring of compliance with the environmental policy of their companies, as well as the implementation of the measures provided for in the EMP. Laboratories with which contracts were signed for industrial environmental monitoring were able to arrive at Lot 1 and Lot 3 during periods of relaxation of quarantine in July, August, September and October 2020. On Lot 2, due to the suspension of work, no environmental instrumental measurements were organized and carried out.
40. According to the contractual obligations, Contractor's environmental specialists on the sites adhere to all the requirements of the environmental aspects of the contract, in particular, requirements of the General Contract Conditions, such as 4.7. Setting out, 4.8. Safety procedures, 4.13. Rights of way and facilities, 4.18. Environmental Protection, 6.7. Health and safety. Due to the remote work of an environmental specialist on Lot 1 and Lot 3, safety and protective measures specialists provided this work at their sites.
41. During the reporting period, CSC carried out inspections on Lot 1, Lot 2 and Lot 3. An environmental audit was carried out to eliminate non-conformances previously issued for Lot 1, Lot 2 and Lot 3 PEM reports were reviewed. For Lot 1 and Lot 3, 4 monthly PEM reports are submitted except of November and December, when the measurements were not done due to the restricted access to the site by the quarantine requirements. For Lot 2 there were no any PEM reports due to the work suspension on this site.
42. The contractors applied relevant measures according to the instructions of the Chief sanitary doctor of the Republic of Kazakhstan to reduce the number of employees by transferring at least 50% of employees to a remote work format. The contractors' environmental specialists worked in a remote work format. At the sites, Headquarters were formed to ensure preventive measures and appropriate coordinators were appointed responsible for providing resources for personal protection (masks, gloves, disinfectants, soap and detergents), for carrying out preventive and disinfecting measures on the territory of construction camps and construction sites.

¹ **Reference to the official resource <https://inbusiness.kz/ru/last/v-aktyubinskoj-oblasti-prodlili-strogij-karantin>**

Contractors conducted awareness campaigns among workers on importance of adherence to preventive measures and social distancing. Posters are displayed in living quarters and workplaces, in languages that are applicable to the sites. The PMC introduced daily monitoring of statistics on the provision of Contractors with personal protective equipment (masks, gloves, disinfectants, etc.) with preventive measures and recorded cases of diseases. To collect and analyze information from the sites, a daily and weekly report form was developed with the CSC and implemented. Health and safety specialists and medical personnel from the sites were involved in this monitoring. All these measures allowed the Contractors to prevent the spread of the COVID-19 pandemic to the sites. There were no any cases of COVID 19 infections among Contractors' personnel during the reporting period.

3.2 Site inspections

43. During the reporting period, the Engineer conducted field visits to check implementation of EMP and HSE measures on September 15, 2020 and 12/18/2020. The audit results are shown below in Table No. 7. For Lot 2, no data received since the work on the site is suspended.

Table 7. Site visits information

Date of visiting: 15.09.2020., 18.12.2020.

Indicator code	Name and highlights	Findings on Lot 1	Findings on Lot 3
D1	EMP and site-specific environmental plans	In work on the site. No adjustments or changes. Industrial environmental monitoring was carried out by the environmental laboratory, instrumental measurements were carried out on July 17, 2020, August 14, 2020, September 17, 2020, October 26, 2020.	
D2	Availability of the Health and Safety Plan (HSE), the introduction of corrective actions: measures to prevent spread and prevention of the Coronavirus COVID-19 pandemic.	The ecologist is absent on the site due to the remote form of work. Responsibility for the implementation of measures for HSE is assigned to the safety specialist and medical personnel. Medical personnel have been appointed responsible for the prevention of COVID 19. Disease prevention posters are displayed in the living quarters. The pictograms warning of the danger are posted around the town. Hand processing areas have been organized, cleaning and processing schedules for the office, canteens and residential part of the town have been posted.	
D3	Availability of emergency plans and corrective actions	There is a plan on the site. The instructions are fully developed. Verbal recommendations issued for the emergency plan have been followed by the contractor. In particular for effective communication with the local health department (SES), the contact data should be posted in prominent places for contacting emergency situations.	
I1	Readiness and resource availability of medical centers	The medical center is organized at the Zhaksymai production base and in the most residential town. Since November, the medical center at the production base has been closed due to a reduction in construction work. A medical center in the residential area is available. Resource capability is low. In places for sanitary and hygienic purposes (sinks in the toilet, in the canteen), there are detergents and disinfectants. A	A medical center is available for staff. The availability of medicines is low. Applications for medicines have not been processed since July. Poor provision of personal protective equipment (medical masks, gloves, antiseptics) The medical staff constantly monitors compliance with sanitary-hygienic and epidemiological measures. In crowded places, there are graphic posters about the prevention of coronavirus, HIV / AIDS, STDs / STIs.

		quartz lamp is installed in the cooking room. There are no any instructions for handling dishes in the washing shop. Disinfectants are available. The washing staff does not know the instructions for processing cutlery and dishes. In crowded places, there are graphic posters about the prevention of coronavirus, HIV / AIDS, STDs / STIs.	
I2	Sanitary and hygienic condition of the camp, dining rooms, places of residence, common areas, sanitary and hygienic premises, provision of soap and detergents	Dormitories has no proper cleaning (2 times a day with disinfectants), toilets and showers are dirty. There is one technical staff for all premises, who will not be able to provide necessary preventive and hygienic measures, since they also clean in the offices of the engineer and the contractor, in the residential part of the camp. There is no separate cleaning staff in the dining room. Relevant instructions have been issued to correct non-conformities.	Adequate disinfectants are provided in the dormitory and in the canteen. The technical staff observes the frequency of cleaning the premises and processing the surfaces of tables and furniture.
P1	Knowledge of the algorithm of actions by medical personnel when symptoms of the corona virus COVID-19 are detected.	Satisfactory	Satisfactory
P2	Implementation of the Health and Safety Plan.	Partial, not enough resources for disinfection.	Resourced, plan activities followed
P3	Recommendations, instructions, notes on nonconformities	<ul style="list-style-type: none"> The site for fuel and lubricants has not been brought into compliance with the requirements and norms of the Technical Regulations for such facilities, and the recommendations of the Bank's mission have not been taken into account (October 2019); For liquid waste from the asphalt plant, there is place for the placement and subsequent use of water for technical needs: dust suppression, etc. Solid waste incineration is prohibited, but there are tanks near the bitumen storage where residues of solid waste incineration; 	<ul style="list-style-type: none"> The storage area for fuels and lubricants is oiled with oil spills; The site for the placement of solid waste is brought to the required condition, the containers are marked; Control over the implementation of the waste management plan was ensured.

		<ul style="list-style-type: none"> • The places of open burning for waste were eliminated, explanatory work was carried out to the heads of the repair shop and the operators of the plant; • Local contamination of fuels and lubricants at the site and at the production base. Necessary measures have not been eliminated and taken; • The site is in good condition, containers for temporary storage of solid waste are removed by a specialized company as they are filled. 	
EE1	The presence of negative manifestations from the local population	no	no

D - Documents, plans, etc., I - site infrastructure., P - processes, actions., EE- external environment

** - data on Lot 2 were collected remotely with assistance of the environmental specialist and safety and road safety specialist*

44. In the context of the introduced quarantine measures in the region, the contractors Lot 1 and Lot 3 have demonstrated their commitment to continue to comply with measures to ensure the environmental and social safety of the project and the external environment.

3.3. Problem Tracking (Based on Non-Compliance Notifications)

45. During the audit of the sites in September and December of the reporting period, work was noted to eliminate previously identified inconsistencies. Inconsistencies in categorization revealed in the previous period were classified as significant since they occurred more than once. Re-identification of nonconformities is essential. So for Lot 1, the following inconsistencies previously identified were eliminated in the current reporting period:

- Local fuel and lubricant spills at the Zhaksymay production base in the area of the mechanical repair shop and at the fuel and lubricant storage site are eliminated;
- Inadequacy of fire protection shields with resources for elimination of emergency spills of fuels and lubricants brought into compliance with safety requirements;
- On the territory of the ACP, the spontaneous disposal of production wastes was eliminated. Concrete rings were delivered and installed;

46. For lot 2, in the previous reporting period, the Engineer's instructions were issued to replace the septic tank cover, to bring the septic tank into proper condition, since the soil around the septic tank has settled and there is a possibility of soil subsidence. The irrational use of water from an underground source organized from a well at the construction site was also noted. Water flowed through a hose to the adjacent territory. The reason for the absence of the plug / valve is associated with the unstable operation of the pump installed on the well. The engineer recommended improving the mechanisms into proper condition, to exclude the irrational use of water resources. It was not possible to conduct an audit of the site during the specified period since the construction camp was suspended. Construction work was suspended.



Figure 6. Construction site of Lot 2 in Karauylkeldy village. CHP and security. December 2020

47. For Lot 3, the inconsistencies identified in the previous period were eliminated, but in the absence of proper control over the observance of safety measures and protective measures, they led to the fact that the territory was again contaminated with local spills, there were no safety equipment on the fire shield. Below in Figure 7 is attached the indicated discrepancy in comparison with June and September of the 2020.



Figure: 7. Fuel storage area, Production base "Nogayty". Lot 3, June 17, 2020 On the left is a photo dated 06/17/2020, on the right this object is 09/15/2020.

48. Also, on the sites of Lot 1 and Lot 3, the attention of ecologists was drawn to the compliance with the dust suppression schedule in the areas where intensive construction work is performed, as well as compliance with the deadlines for submitting monthly, semi-annual and IEM reports.
49. According to the register of complaints and appeals for Lot 1, Lot 2 and Lot 3, during the reporting period, there were no appeals and complaints regarding non-compliance with environmental guarantees. Since the beginning of the implementation of the Project by its status as of December 31, 2020, 5 applications have been received for Lot 1. 2 requests, one in 2017 and another in 2018 for additional information about the project, 3 requests in 2018

regarding violations in the field of labor relations between an employee and a contractor. They are all closed. There were no complaints or appeals for Lot 2. For Lot 3, 1 appeal was registered on July 11, 2018 regarding dustiness at the site. The complaint has been processed. During the reporting period, no complaints or appeals were received. There are no open complaints and appeals on the Project. Appendix 9 provides detailed information in the grievance register.

50. During the reporting period, 2 inconsistencies with environmental standards of activities at the Lot 3 site were recorded: local pollution on the site of a stationary gas station in the town of Nogayty and here the fire shield was not complete to ensure the safety of this facility. Table 8 below provides information on the environmental problems for the reporting period since beginning of the project. The data for the previous period of the report is given in the table 8.1.

Table 8. Environmental Tracking Summary Report for the current period from the beginning of the project on Lot 1, Lot 2 and Lot 3

Total number of problems on the project	30
Number of Open Issues	2
Number of Closed Issues	28
Closing percentage	93%
Open Issues for the Reporting Period	2
Closed Issues for the Reporting Period	4

Table 8.1. Data for previous period 1-st half of 2020

Total number of problems on the project	8
Number of Open Issues	2*
Number of Closed Issues	6**
Closing percentage	100%
Open Issues for the Reporting Period	2
Closed Issues for the Reporting Period	6

* - regarding discrepancies for Lot 3, contamination of the site for fuels and lubricants and incompleteness of the fire shield;

** - for Lot 1: local contamination of the site with fuels and lubricants, incomplete fire shields and liquid production waste. For Lot 2: septic tank, non-rational use of water and fuel and lubricants site.

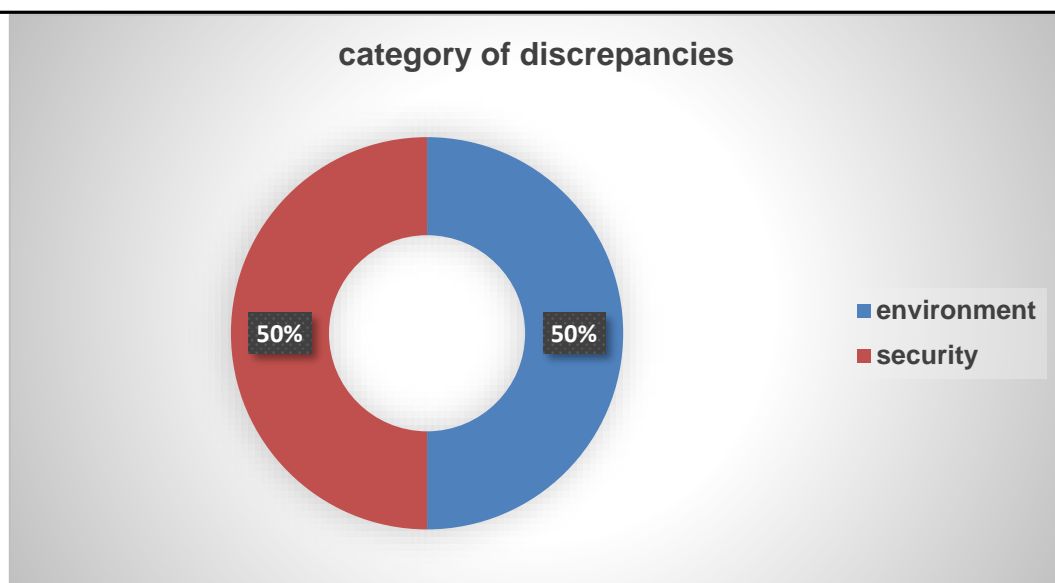


Figure 8. Chart of nonconformity categories remaining open during the reporting period

51. The diagram in Figure 8 shows the nonconformity categories for the reporting period. Compared to the previous period (the first half of 2020), there is a positive trend in the number of non-conformities, which is from 8 to 2. During the reporting period, one non-conformity was registered for one environment and safety, and both were registered at Lot 3.

3.4 Tendency (general directions)

52 During the reporting period in the process of monitoring and audit of construction sites, no complaints from the population regarding the non-compliance with environmental protection measures were recorded. Non-conformances were eliminated by the Contractors at all sites promptly. Corrective actions were taken immediately and written reports with photographs of the results of the actions taken were provided. In general, there is a positive trend in timely response to the elimination of inconsistencies and violations. However, it should be noted that in the absence of proper monitoring on Lot 3, there were again violations of the operation of a stationary gas station.

3.5 Unforeseen environmental impacts or risks

53. During the monitoring periods of construction sites, no unforeseen environmental impacts were identified. Possible risks described in the pre-project assessment process were not implemented, since all construction work was carried out under the supervision of environmental specialists on the site. The results of environmental monitoring confirm this statement.

4. RESULTS OF ENVIRONMENTAL MONITORING 4.1. Overview of monitoring conducted during the reporting period

54. The information only on Lot 1 and Lot 3 will be reflected in this section. For Lot 2, the EMP works were not carried out due to the suspension of construction work and which were not resumed during the reporting period.
55. The main applicable ambient air quality standards include:
- hygienic standards of the Republic of Kazakhstan (maximum permissible concentration (MPC) of pollutants in the ambient air of populated areas in accordance with the order of the Minister of National Economy of the Republic of Kazakhstan No. 168 dated February 28, 2015);
 - standards for ambient air quality in accordance with EU Directive 2008/50/EC (On the quality of ambient air and measures for its purification in Europe);
 - WHO guidelines for ambient air quality (2005) and additional WHO guidelines and assessments related to air pollutants.
56. Criteria for impacts on ambient air quality are more stringent than those specified in the EHS Guidelines. According to national standards, exposure to minor intensity is considered exposure associated with an increase in airborne contaminants of less than 10% MAC, while as a general rule, the EHS Guidelines suggest a level of 25% of applicable air quality standards in order to maintain future opportunity for further sustainable development in this air basin.
57. The main regulatory and methodological documents that guided the work on dosimetry monitoring on the sites are: SETORB-2019 "Sanitary and Epidemiological Requirements for Ensuring Radiation Safety". Order of the Ministry of Health of the Republic of Kazakhstan No. KR DSM-97 dated 26.06.2019
58. The impact of noise was assessed in accordance with the normative acts in force in Kazakhstan MSN 2.04-03-2005 "Protection against noise"; • Order of the Minister of National Economy of the Republic of Kazakhstan "On Approval of Hygienic Standards for Physical Factors Influencing Human" dated February 28, 2015 No. 169. Threshold values according to the Guidelines for noise in residential areas, World Health Organization (WHO), 1999 not applicable as there are no residential areas in the immediate vicinity of the project.
59. The works on production monitoring of environmental protection at the construction sites for Lot 1 and Lot 3 were carried out by the Testing Laboratories "East-Eco" LLP within the framework of the concluded contract No. 109-1 / 11 / F-M dated 05.01.2020, which has a certificate KZ. T.05.0302 dated 22.10.2018 for a period until 22.10.2023, confirming the existence of conditions necessary for performing measurements in the area of activity assigned to the laboratory: conducting analytical control of indicators of pollutants in the working area, atmospheric air and sources of emissions into the atmosphere, surface, natural waters, and analysis of soil and physical factors.
60. Laboratory's activities are regulated by environmental guidelines and regulations, health and hygiene standards, requirements, lists of maximum permissible concentrations, estimated safe exposure levels, maximum permissible discharges and emissions of harmful substances operating in the Republic of Kazakhstan. Works on production monitoring were performed in accordance with the Environmental Code of the Republic of Kazakhstan dated January 9, 2007 No. 212-III. Contractors carried out primary monitoring in accordance with the sampling and measurement points approved by the CSC Engineer. On Lot 1 and Lot 3, measurements were carried out on April 24-25, 2018, on Lot 2: May 23-24, 2018. Data on measurements and laboratory tests are presented in the first semi-annual report of 2018 and recorded as indicators obtained prior to the start of construction work.
61. On the sites Lot 1 and Lot 3, instrumental measurements and laboratory studies were carried out in the places of construction work in the context of monthly indicators. Based on the

laboratory test protocols, conclusions were drawn on the impact on the environment and the need for mitigating measures to reduce the negative impact.

62. Reconstruction of the road (construction works) according to sanitary rules No. 237 dated March 20, 2015 is not classified. Unclassified objects in accordance with the Environmental Code of the Republic of Kazakhstan belongs to category IV. The base camp for the period of construction works belongs to the III class of danger according to the sanitary rules, and to the II category under the Environmental Code of the Republic of Kazakhstan.
63. Contractors Lot 1, Lot 2 and Lot 3 keep internal records, form and provide periodic reports on the results of industrial environmental monitoring in accordance with the requirements established by authorized bodies 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). Lot 1 and Lot 3, the PEM reports for July, August, September and October were submitted.
64. Impacts are recorded by environmental specialists and monitored by the activities described in the SEMP. In accordance with the SEMP and along with the Environmental Monitoring Plan, Contractors on Lot 1 and Lot 3 performed measurements and monitoring of air quality, soil, noise, vibration and socio-cultural resources. Results of monitoring based on laboratory measurement reports are presented below in the relevant sections.

4.1.1 Environmental measurements on Lot № 1

4.1.1.1 Noise and vibration

65. On lot 1, measurements of vibration and noise level were carried out in accordance with the approved scheme of sampling points. Figure 9 below shows a diagram with sampling points and measurements of vibration and noise levels.

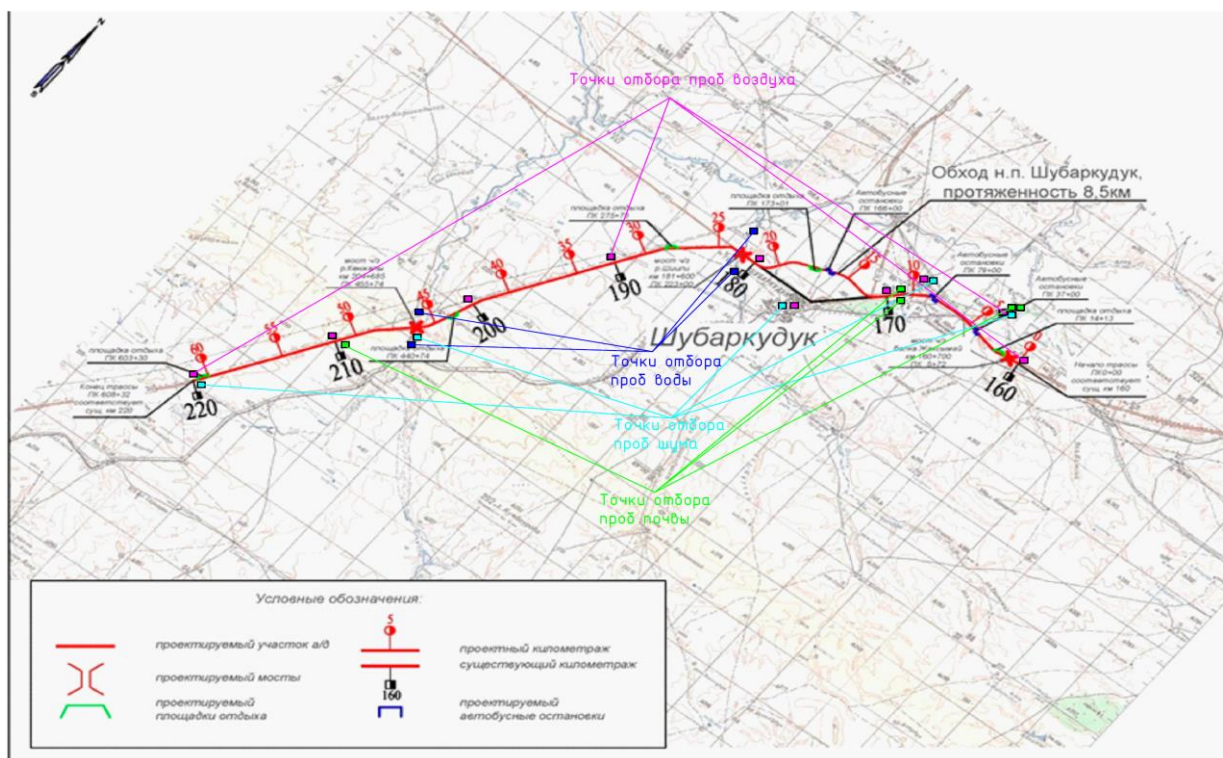


Figure 9: Situation diagram with water sampling points (dark blue), noise and vibration measurements (light blue), air (pink) and soil sampling (green) on Lot 1

66. Dynamics of changes in noise and vibration on Lot 1 areas during the reporting period are represented by instrumental measurements for the period July, August, September and

October. The main regulatory and procedural document that guided the work on monitoring noise and vibration is

- i. Order No. 169 of 02/28/2015. "Hygienic standards to the physical factors affecting the person."
- ii. GOST 31319-2006 (EN-14253:2003) Vibration. Measurement of general vibration and assessment of its impact on humans;
- iii. GOST12.1.0.12-90 Vibration safety;
- iv. GOST12.1.003-83- Noise. General requirements of safety;
- v. Order No. 169 of 02/28/2015. "Hygienic standards to the physical factors affecting the person."

National standard (GN Order No. 169 dated February 28, 2015) determines MPL of noise level on the construction area of 80 dBa and for operator work in laboratories, asphalt plant- 90 dBa, and MPL in residential areas - 60 dBa. This report adopts the IFC standard with a threshold of 55 dBa, so this threshold is considered as the strictest threshold for monitoring. With an acceptable level of 80 dBa for workplaces of drivers of road-building equipment (this MPL is taken from Annex 2 to the order of the Minister of National Economy of the Republic of Kazakhstan "On approval of hygienic standards for physical factors affecting a person" dated February 28, 2015 No. 169 "Sound pressure MPL, sound levels equivalent sound levels for the most typical types of workplaces") marked the highest value equal to 52.0 dB in July at the work site of ACP and the lowest within the value of 47.0 dBa in August was recorded in the range of 44.0-57.0 dBa. At the same time, the highest value was recorded at the measuring point of the Production Base Zhaksymay, and the lowest value was recorded at the measuring point at KM 170. These indicators are below than the state standard and the IFC threshold. In September, a value was recorded in the range of 47.0 -58.0 dBa. The highest value was recorded at the measuring point "Zhaksymay Base", and the smallest value was recorded at the measuring point "Railway dead end". In October, measurements were recorded in the range of 47.0-55.0 dBa. The largest value is at the ABZ point, and the smallest at the measuring point at Km 160.

67. The specified data from the protocols of the laboratory for measuring the noise level show that the noise level from the working construction mechanisms does not exceed the MPL (80 dBa) of the state standard at all measurement points. Consequently, they do not have a negative impact on the health of working personnel. But the measurement data at the asphalt plant site located on the territory of the Zhaksymay Base have a value within and insignificantly exceeding the IFC standard threshold, and therefore contractor's environmental specialist was recommended to take organizational and technical measures to reduce negative impact of noise. It is necessary to define and adhere to the spatial and temporal framework of noise exposure.

68. In terms of vibration acceleration on this Lot 1, no excess of the permissible equivalent level of vibration acceleration of 95 dB recorded at the measurement points. All measurements at the indicated points of the diagram in Fig. 7 were recorded by the measurement protocols in July within 37-43 dB, measurements showed in the range of 37-43 dB in August, values were recorded in the range of 37-42 dB in September, within 37-44 dB in October. These values of the vibration acceleration level indicate that on Lot 1 there is no negative impact both on the environment and on the health of the personnel on the site.

4.1.1.2 Soil

69. Instrumental measurements were carried out in accordance with the following regulatory and methodological documents: GN Order No. 452 of 06/25/2015 Hygienic standard for environmental safety (soil) and GOST 12071-2014 Soils. Selection, packaging, transportation and storage of samples. Soil sampling was carried out according to GOST 28168-89 Soils. Sample selection.

70. Soil samples were taken from 2 points in Zhaksimay Production Base Km 168, 2 points on road sections Km 160, Km 170, Km 180, Km 190, Km 200, Km 210, km 220. Laboratory data are

presented in Annex No. 1. The results of soil samples analyzes show that the magnitude of the negative impact on the surrounding soil cover at the border of the SPZ is assessed in aggregate by indicators, excluding oil products, as low, while the area of impact on vegetation corresponds to the local scale, duration of the impact is constant for the period of construction work.

Analysis of the data from the protocols of measurements carried out in the framework of the PEM shows that during the reporting period there is an excess of the content of oil products in soil samples taken at all points of sampling. At the same time, the maximum value was recorded at the Km 160 section where the content of oil products is noted within 85 mg/kg in May and 79 mg/kg in June. Further, the excess of the primary measurements was recorded at points 1 and 2 at the Production Base Km 169. Here it was recorded in May at point 1: 60 mg/kg, in June - 54 mg/kg. At point 2 in May, it was recorded - 81 mg/kg, in June - 63 mg/kg.

71. According to the hygienic standards for environmental safety (in particular for the soil), approved by the order of the Minister of National Economy of the Republic of Kazakhstan dated June 25, 2015 No. 452, the soils of Lot 1 can be assessed as safe since MPCs have not been exceeded for all determined pollution indicators excluding calcium content. According to the protocols of instrumental measurement of radiological indicators, the level of contamination with radioactive substances is defined as the natural level.
72. During the reporting period, on Lot 1 the excavation work was not carried out in 10 quarries. Rehabilitation work is performed in the quarry No. 1. The information presented in the previous semi-annual report for all quarries has the previous status without changes in the reporting period.

Table No. 9. Information on borrow pits on Lot 1 site by status as of June 30, 2020

№	Name	KM/CH	Location		Reserves		extraction	Recultivation
			left	right	area, ha	quantity, thousand m ³		
1	Borrow pit 1	29+36		218	3,99	104,9	12,0	80%
2	Borrow pit 2	49+59	1033		4,99	126,5	11,1	0%
3	Borrow pit 3	73+61		188	3,99	104,9	17,3	0%
4	Borrow pit 4	146+94		403	3,99	104,9	38,2	0%
5	Borrow pit 5	203+47		745	15,9	406,8	75,7	0%
6	Borrow pit 6	294+05	1038		15,9	406,8	118,0	0%
7	Borrow pit 7	351+20	319		3,95	104,0	85,0	0%
8	Borrow pit 8	391+46	1010		15,9	422,5	128,2	0%
9	Borrow pit 9	466+32		162	3,99	104,9	18,9	0%
10	Borrow pit 10	556+75		148	3,99	100,9	75,1	0%

4.1.1.3 Water quality

73. Main regulatory and methodological documents that guided monitoring of natural waters in the Shieli River km 181+600, Kenzhaly river km 204+500: No. 209 dated March 16, 2015. Water sampling was carried out according to GOST RK GOST R 51592-2003 "Water. General requirements for sampling." Water sampling was carried out during reporting period from Shieli and Kenzhaly rivers in July, August, September and October 2020.
74. According to the laboratory data of the Measurement Protocols (Annex No. 2) for the following indicators: The excess of the primary measurements was noted in the samples of total hardness taken from the Kenzhaly river and in the samples of chlorides and sulfates taken from the Shieli river. But they do not exceed MPC. The dynamics of changes are shown below in Figures 10 and 11.

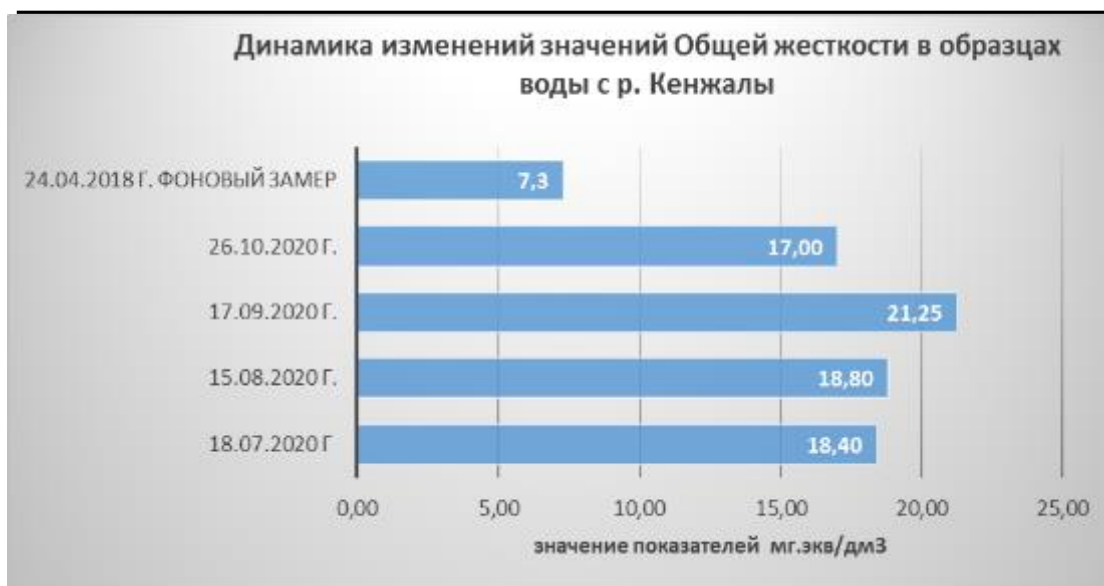


Figure 10. Dynamics of the total water hardness values in the river Kenjaly



Fig. 11. Dynamics of the chlorides and sulfates content in the water of the river Shieli

75. The source of the increase in hardness in the Kenzhaly river is primarily associated with the influence of groundwater, which, as a rule, has a higher hardness than surface water. Since no impacts from the Project took place. The contractor takes out all his waste in accordance with the concluded contracts for utilization and placement at a special landfill. Along the Shieli river, the content of harmful substances, chlorides and sulfates (Fig. 11), does not exceed the permissible concentration for watering livestock.
76. For the rest of all indicators, the level of pollution does not exceed the maximum permissible concentration for each of the determined indicators obtained during baseline analysis. . Laboratory analysis data are presented in Annex No. 2.

² Zarubina R.F. 3-35 Analysis and improvement of the quality of natural waters. Part 2. Methods for assessing the quality of natural waters: 2011, p. 65.

4.1.1.4 Air quality

77. The main applicable ambient air quality standards include:

- hygienic standards of the Republic of Kazakhstan (maximum permissible concentration (MPC) of pollutants in the ambient air of populated areas in accordance with the order of the Minister of National Economy of the Republic of Kazakhstan No. 168 dated February 28, 2015);
- standards for ambient air quality in accordance with EU Directive 2008/50 / EC (On the quality of ambient air and measures for its purification in Europe);
- WHO guidelines for ambient air quality (2005) and additional WHO guidelines and assessments related to air pollutants.

78. Measurements of air pollution level on Lot 1 site were carried out in accordance with the approved sampling scheme. Measurements were carried out according to the following indicators: Inorganic dust, suspended solids at the asphalt plant and concrete plant, Nitrogen dioxide, Sulfur dioxide, Carbon monoxide, Formaldehyde, Hydrocarbons C12-C19, Hydrogen sulfide. Laboratory measurement results are presented in Annex No. 3.

79. During reporting period, measurements of the air pollution level at the following points were carried out on this lot: Km 160, Km 170, Km 180, Km 190, Km 200, Km 210, Km 220, at the Shubarkudyk and Kopa villages. Also 2 measurements are carried out included in the 1st semi-annual of current year: Railway dead end, Bitumen pit. The frequency of measurements was monthly for July, August, September and October.

80. The obtained laboratory data for the reporting period in all samples show the absence of atmospheric air pollution level excess for all indicators at all points. Do not exceed the values obtained before the start of construction work and with the MPC.

81. The analysis of the industrial environmental monitoring of the atmospheric air on the road reconstruction sites showed that the instrumental measurements carried out in July, August, September and October 2020, the highest maximum and average concentrations of pollutants for all analyzed substances do not exceed the sanitary and hygienic standards. -permissible concentrations (MPC m. r.), established for populated areas. The average concentrations of nitrogen dioxide, nitrogen oxide, sulfur dioxide, carbon monoxide in the surveyed area are within the permissible limits, the concentration of inorganic dust 70-20% SiO₂ does not exceed the established standard in industrial and residential areas.

82. According to national standards, exposure of minor intensity is considered exposure associated with an increase in airborne pollutant concentration of less than 10% MPC, while as a general rule, the EHS Guidelines suggest a level of 25% of applicable air quality standards to ensure that preserve for the future the possibility of further sustainable development in this air basin.

4.1.2 Environmental measurements on Lot 3

83. On Lot 3, the instrumental measurements were carried out by a certified laboratory, which carried out these works on Lot 1, since there is only one contractor for these lots. All regulatory and methodological approaches are the same as those applicable for Lot 1.

4.1.2.1 Noise and vibration

84. Measurements on the level of noise and vibration accelerations were carried out at the following points: ACP, Production base "Nogayty", railway deadend, **BSU** section, km 275, km 285, km 300, km 310, km 320, Based on the results of measurements for the reporting period there was no excess of MPD. Analysis of the data from the Measurement Protocols shows that the sound level in July was recorded within the range of 47dBA - 57dBA, in August 46dBA - 55dBA, in September 46dBA - 59dBA, in October 47dBA - 55dBA. These values do not exceed the permissible sound level of 80 dBA. Vibration acceleration values are fixed within 38 dB - 51 dB with an admissible equivalent vibration acceleration level - 95 dB.

4.1.2.2 Soil

85. Instrumental measurements of soil pollution were carried out at the following points: Nogayty Production Base Km 301, road sections Km 275, Km 285, Km 300, Km 310, km 310 and Km 330. Appendix No. 5 presents the PEM reports data for July, August, September and October of current year. An analysis of the data shows that at all controlled points for the reporting period has no MPC exceeded. The magnitude of the negative impact on the surrounding soil cover at the border of the SPZ is assessed as low, while the area of impact on vegetation corresponds to the local scale, the duration of the impact is not constant.
86. Excavation work from borrow pits was carried out in the quantities planned for production work. Detailed information is presented below in Table No. 10. According to these data, during reporting period, the Contractor made excavation in 2 borrow pits: No. 2, No. 9.

Table 10. Information about borrow pits on Lot 3 by status as of June 30, 2020

№	Name	KM/PK	Reserves		Excavation 2nd half of 2019 thous, m3	Excavation 1st half of 2020 thous, m3	
			left	Area thous. ha	Quantity, m ³		
1	Borrow pit 11	51+95	270	8	203,6	120,6	-
2	Borrow pit 12	125+64	491	15,9	422,5	111,5	5
3	Borrow pit 13	161+50	285	3,99	100,9	135,6	-
4	Borrow pit 14	244+83	357	4,02	101,6	125,3	-
5	Borrow pit 15	304+79	285	3,99	153,9	195,7	-
6	Borrow pit 16	354+69	276	3,99	104,9	145,8	-
7	Borrow pit 17	404+22	194	16	409,4	122,7	-
8	Borrow pit 18	478+12	1340	15,9	406,8	182,4	-
9	Borrow pit 19	522+16	313	3,98	104,6	949,0	20,3
			Total	75,77	223,13	2088,6	25,3

4.1.2.3 Water quality

87. Within the framework of industrial environmental control, monitoring of water resources on the Ayryk, Zharly and Nogait rivers in this section of the road was not carried out since there is no water in them.

4.1.2.4 Air Quality

88. Monitoring of air pollution was carried out in areas where construction work was carried out during reporting period: km275, km 285, Km 300; Km 310; Km 320, ACP & CBP, railway dead end & bitumen pit. Appendix No. 6 presents data from PEM report for July, August, September and October. Analysis of PEM report data of air pollution show that at all measurement points there is no recorded excess of MPC for all determined indicators. According to the results of observations, in general, in all areas of Lot 3, the air condition was assessed as stably good. No deterioration in air quality.

4.2 Tendency (general direction)

89. During reporting period, no negative environmental impacts were noted on atmospheric air, soil, water resources, vibration and noise, the health of the persons affected by the project, as well as flora and fauna.
90. No negative trends were observed in regards to environmental indicators since beginning of the project.

4.3 Summary of monitoring results

91. Submitted reports on PEM from Lot 1 and Lot 3, information in monthly reports on environmental protection for Lot 2, as well as observations and audits indicate absence of negative impact of construction work on the environment. The content of pollutants (water, soil, air, PAP health) noise and vibration do not exceed MAC. The measures taken by the contractors to reduce environmental impact are sufficient. The activities of the Contractors exert an acceptable load on the environment.
92. At Lot 1 and Lot 3, the tandem "international and local environmental specialist" showed productive interaction in the previous period, but during the reporting period this interaction was absent due to organizational changes in the Contractor's staffing table and the dismissal of the local environmental specialist for his own reasons. In view of the imposed emergency and the continuation of the quarantine, the Contractor is not able to mobilize another environmental specialist to the site to complete the EMP in terms of the borrow pit management plan where the remediation of the used borrow pits is planned. All current work is carried out under the guidance of the project manager and under his responsibility.
93. The analysis of the executed work to bring them into compliance with the norms, rules, and environmental protection requirements is generally assessed as satisfactory. The work was carried out in accordance with the EMP. Detailed information is presented below in Table 11.

Table 11. Environmental Compliance Monitoring on Lot 1, Lot 2 and Lot 3

No	Location	Problematic issues	Recommended Action	Implementations / Compliance	Fulfillment status
1	Road site	Use of safe tools (goggles, gloves, overalls, helmet, safety shoes, etc.) by workers / engineers.	Availability of safe tools in the base camp and on the construction site.	Safe tools are provided to workers and engineers as needed	Corresponds on Lot 1, Lot 2 and Lot 3
2	Base camp	Water supply	Provide water for drinking and for domestic use, presence of sinks for washing in showers, toilets, in the kitchen and dining room. Cross control and uninterrupted supply of drinking water	Facilities provided. Communications connected to the camp	Provided on Lot 1, Lot 2 and Lot 3
3		Sanitation and Hygiene	Providing toilets and flushing water in showers. Transportation to septic tanks for processing and disposal	Base camp is provided and fulfilled.	Provided on all sites.
4		Kitchen and dining room	Providing adequate ventilation, taps and hygiene of places for receiving preparation and	On Lot 3 and Lot 2, the construction of its own dining room and outsourcing of	Lot1 has its own canteen, Lot 2 has its own canteen and rent

			eating, storage of products	food services and catering services of a third party. On Lot 1, a complex with all conditions rented from local resident	of premises with provision of catering and cleaning services are provided on Lot 3
5		Drainage in base camp	Provision of water drainage in the camp. Avoid accumulation of water inside the camp.	The complex rented on Lot 1 has all necessary connections to the tap system Lot 2 and Lot 3 have a drainage and wastewater system	Corresponds on Lot 1 and Lot 3
6		Solid waste and waste	Location of bins and urgent modernization of waste disposal pits, cover and control on the territory of the base camp.	Lot 1 rented a complex of buildings of a local resident, with provision of export and disposal. Fire shields provided on production base of all sections. Monitoring the implementation of the waste management plan in all areas.	Provided on Lot 1. Lot 3 has 2 inconsistencies that need to be eliminated: local soil contamination and complete set of fire shields at a local gas station
7	Quarry / borrow pit territory	Material collection comply with legislation of the Republic of Kazakhstan on environmental protection	For Lot 2 to extend the permit for excavation from borrow pits	Application for renewal filed	Only for Lot 2. Extension is under consideration
8	Firefighting equipment in base camp, office.	Firefighting equipment should be located in the base camp and in the office.	Locate firefighting equipment in a visible place so that it can be used in case of emergency.	In all infrastructures of the camp and the production base	Provided on Lot 1
9	Movement of transport and equipment in the base camp.	Excessive dust pollution in the camp and noise environmental pollution as a result of traffic on the camp and site.	Equipment must be used at the construction site and shift camp in accordance with its environmental standards regarding noise.	In the residential area of the base camp, at the production base	done on Lot 1 and Lot 3
10	ACP	Provision of PPE, provision of LPP on demand and dairy products, Dust suppression in the territory and in warehouses	Compliance with safety standards and requirements, ensuring compliance with FIDIC conditions, Contractual obligations	Provision of PPE, dust suppression schedule controlled	done on Lot 1 and Lot 3

4.4 Use of Material Resources

4.4.1 Current period

94. The quantity of resources used during the reporting period by Lots 1, 2 and 3

Table 13. Amount of used resources for the 2nd half of 2020

Sections Resources	Lot 1	Lot 2	Lot 3
Electricity, kWh	235 040	122 818	428 708
Natural gas, thn m ³	834	196	0
Drinking water, m ³	320	26,19	210
Water for technical needs, m ³	5 100	46,26	480

4.4.2 Cumulative use of resources

95. On Lot 1, electricity consumption in the second half of the year increased by 84,292 kW / h. compared to the first half of the year. The contractor has tightened control over energy consumption, which has significantly reduced costs. In the previous period, there was an increase in consumption by 14 times compared to the period of 2019, the Contractor continues to carry out periodic timing of work processes and reconciliation of readings of resource consumption. This event increased discipline and responsibility for the rational use of resources. For drinking water and industrial water, there is also a decrease in consumption volumes, which is associated with a reduction in costs and constant monitoring of consumption.
96. For Lot 2, according to the resource use data for the second half of 2020, the contractor increased electricity consumption by 27% compared to the first half of the year. As regards natural gas and drinking water, a decrease is noted due to the suspension of works. But the consumption of industrial water increased by 19% compared to the first half of the year due to the need for dust suppression of roads and the construction site.
97. For Lot 3, electricity consumption was reduced by 2 times, this is due to the fact that during the reporting period the Contractor dismantled the ACP and mobilized it to another project.

4.5 Waste management

98. Waste management is organized by Contractors according to the developed Site-specific EMP. On Lot 1 site - generation of household waste is caused by production base "Zhaksymay" located on Km 168. Contractor's laboratory, CBP, ACP, railway dead end, and bitumen pit are located on the territory of this base. Waste from this area is stored on a specially organized site for temporary storage with subsequent export to disposal through the involvement of specialized companies. Removal of household waste from this base is carried out by "Technology XXI Century LLP" on the basis of contract No. 02/05-18 dated May 2, 2018. Monitoring shows that in these areas schedule for removal of solid waste and industrial waste is observed, Since May waste removal is being carried out on daily basis.
99. In the previous period, the recorded non-conformity in organization of a place for collecting liquid waste produced by the plant for reuse for the purpose of dust suppression was brought into proper condition during the reporting period. Reinforced concrete rings were installed to collect liquid industrial waste and prevent groundwater pollution. This type of waste is used in dust suppression
100. For Lot 2. Data for the second half of the year on the sources of solid waste was not provided by the Contractor. Previously, the removal of solid waste was carried out by "Zelenstroy" LLP (Aktobe) in accordance with the prolonged contract No. 64 dated August 25, 2018. Monitoring at this site showed that the town is mothballed, there are no sources of solid waste generation. Lot 2.
101. For **Lot 3**: a base camp with infrastructure of the residential part, offices, canteen, laboratory of the Contractor, CBP, ACP, railroad dead end, workshops are located on the Production

Base "Nogayty" According to the camp management plan, places for temporary storage of solid waste are organized with the subsequent removal to the landfill. Removal of household waste from this base is carried out by "Technology XXI Century LLP" on the basis of extended contract No. 02/05-18 dated May 2, 2018. Information on the types and quantity of solid waste removed at the time of this report is not submitted. The indicated volumes are 0.8. tons were transported by LLP "Technologies XXI century" and placed at landfill of the Baiganinsky district.

4.5.1 Current period

102. During the reporting period, waste management Contractors followed prescribed clauses in the EMP in terms of infrastructure management. Due to lack of special landfills in the places where the project road is being implemented, contractors disposed solid waste to the Baiganin district landfill.

Table 13. Information on removal of household waste for second half of 2020 - Lot 1 and Lot 3

No	Waste	Unit	Waste classification	Quantity	Method of waste disposal
1	Solid waste	ton	Non-hazardous	1,3	Removal to the landfill by specialized company
2	Solid waste	ton	Non-hazardous	0,8	Removal to the landfill by specialized company

4.5.2 Cumulative Waste production

103. The composition of the total generation of waste for Lot 1 and Lot 3 is only MSW. During the reporting period, a specialized company removed 1.3 tons of solid waste under Lot 1. With Lot 3 - 0.8 tons. The contractor provided no other data. Waste data are not provided for Lot 2.

4.6 Health and safety

4.6.1 Community Health and safety

104. On Lot 1 for the reporting period, the total length of the finished bypass road open for traffic has not changed and is 55.5 km. The width of the bypass road meets the requirements and is 9 m. In the reporting period, work was carried out to maintain a temporary road and ensure traffic safety in the following sections: PK 0 + 00-82 + 00, PK 83 + 00 + 00 - 130 + 00, PK 208 +00 - 376 + 00, PK 376 + 00-424 + 87, 424 + 87- 450 + 00, PK 453 + 00-458 + 00, PK 469 + 00-471 + 00, PK 471 + 00-608 + 33. In the summer and autumn periods, dust suppression is provided 3 times a day.
105. The original schemes of travel on temporary bypass roads, agreed with the RSU "Aktobezhlaboratoria" and the UAP of the Department of Internal Affairs of Aktobe from 20.03.2018, 17.04.2018, and 05.05.2018 were changed on the recommendation of the administrative police. The contractor has developed a unified bypass road scheme. This scheme was agreed with the Engineering Service, JSC "NC" KazAvtoZhol "JSC and ORTI UAP DP of Aktobe region dated May 21, 2020.
106. Along the entire length of the bypass road, temporary road signs on a yellow background and signal columns have been installed, corresponding to the agreed scheme with the ODTI APD TP of Aktobe region dated 05.21.2020.

107. The number of signalmen and traffic controllers - 2 people. Additional portable temporary signs were installed at the work sites 1.23. "Road works" and 2.4. "Yield". From September 30, the movement of vehicles is carried out on the newly built new road, in compliance with all traffic safety requirements. Bypasses are preserved on sections of bridges across the river. Shili and Kenzhaly. On the recommendation of the UAP TP of Aktobe region, temporary markings were applied and temporary road signs were installed 1.23 "Road works", 1.17 "Loose gravel", 1.33 "Dangerous roadside", 3.20 "Do not pass", and 3.24 «Maximum vehicle speed limit" 60 km / h with a frequency of 5-10 km. The temporary road signs on a yellow background with a reflective effect were installed along the entire length of the new road opened for traffic in accordance with letter No. out.5 / 7-82 / 5-7076 dated 09/18/2020 from the head of the UAP RP of Aktobe region.
108. Works to close 4 newly formed unauthorized exits / exits to the road under construction for vehicles (PK 121 + 00; PK 209 + 00; PK 245 + 00; PK 272 + 00) were carried out in July. The works to close 10 newly formed unauthorized exits / exits to the road under construction for transit transport (PK 121 + 00; PK 209 + 00; PK 230 + 00; PK 247 + 00, PK 272 + 00, PK 362 +00, PK444 + 00, PK 455 + 00, PK 458 + 00) were carried out in August 2020.



Road closure at PK 121+00



Restoration of the embankment and installation of safety signs on PK 455 + 00



Dust suppression at PK 82+00



Dust suppression at PK 209+00



Temporary markings on the project road



Anti-icing measures at PK 247

109. During the reporting period, 2 accidents were recorded for Lot1. The first accident happened at about 02:40 a.m. of local time on 08/13/2020 at PK 325 + 00 (km 192) in the section closed for traffic (asphalt road) an accident occurred with the participation of one vehicle, Lada Largus with number plate KZ412MZA 04. The driver of this vehicle, while driving from the side of Shubarkuduk settlement towards Karaulkeldy settlement, he did not take measures to reduce the speed in the event of an obstacle to traffic, having failed to control the steering, he allowed the vehicle to overturn on the right side of the road in the direction of the vehicle's movement. The driver was hospitalized in the Bayganinsky Central Regional Hospital (notification letter from the Contractor No. 2094/2 dated 08/14/2020. The second accident occurred at 04:00 local time on 11/12/2020 at PK 280 + 00 (Km188) a head-on collision of two vehicles on the site, open for traffic. One of the drivers drove into the oncoming lane. The injured passenger was taken to the hospital. Letter of notification from the Contractor No. 2227/2 dated 16.11.2020. The reason for leaving the oncoming lane is alcohol intoxication of the driver.
110. For Lot 2, a section of the road PK 130-PK 401 is open for the movement of vehicles. From 16.11.2020, the Contractor concluded the agreement with "Merey and K" LLP for the winter maintenance of the road at the section Km 236-Km 275. Incidents and accidents in the reporting period are not registered.
111. For Lot 3, the total length of the bypass road opened for traffic has not changed and is 55 km. The width of the bypass road meets the requirements and is 9 m. Along the entire length of the bypass road, temporary road signs with a yellow background and signal columns are installed, corresponding to the approved scheme with the UAP of the Department of Internal Affairs of Aktobe on April 17, 2018.

112. During the reporting period, in the frame of road maintenance, backfilling of the bypass road with milled material from PK 349 + 00 to PK 352 + 00 was carried out. The blading works on the bypass road at PK 272 + 00 to PK 551 + 00 was performed.



Blading of bypass road at PK 551+00



snow clearance at PK 349+00

113. During the reporting period, 1 accident was recorded for 3 Lot. 09/14/2020 at 22:30 local time on a section closed for traffic (new road, km 278), there was a head-on collision of two vehicles, Mercedes 190 E with number plate KZ 429 OQO 04 and Lada Granta with number plate c885pc / 163 rus (accounting of the Russian Federation). As a result of the accident, 3 people were hospitalized to the hospital. The circumstances of the accident are being investigated by Bayganinsky RDIA.
114. Table 14 below provides a summary of all incidents that have occurred on the project since the beginning of the road construction.

Table 14. Statistics on incidents and accidents from the beginning of the project

Type	Lot 1	Lot 2	Lot 3
Traffic accident	8	1	3
Accident	0	0	0
Disability	0	0	0
Downtime due to incident	0	0	0
Total:	8	1	3

115. It should be noted that the aforementioned accidents on Lot 1 and Lot 3 were caused by the fault of the drivers, who ignore the speed limit signs prohibiting entry to the project road. Monitoring of each incident showed that safety signs were installed on the site in accordance with the approved plan to ensure safe traffic.
116. Under the project, road safety issues are monitored in accordance with the approved Road Safety Plans (agreed with the CSC and traffic police). Based on the results of the investigation into the circumstances of the road traffic accidents, the authorized body recognized that road accidents are associated with non-compliance with traffic rules in terms of speed limits and compliance with the distance and measures when overtaking a moving vehicle.
117. The issues of observance of safety measures at construction sites are also timely checked by the relevant responsible persons of the contracting organizations. Corresponding

investigations have been carried out on the facts of the incidents, as well as additional briefing of employees.

118. The contractors on the sites carried out work for population safety provision in accordance with the orders of the Chief Sanitary Doctor of the Republic of Kazakhstan. Medical personnel together with health and safety specialists were involved in the organizational work to form a resource base for the implementation of preventive measures to prevent the spread of COVID 19.

4.6.2. Workers Health and safety

119. Health and safety conditions at the workplace are regulated by the Law "On the Safe Use of Machinery and Equipment" 3 No. 305-III 3RK, July 21, 2007, Fire Safety Regulations No. 1077 dated October 9, 2014 and other regulatory legal acts.
120. During the reporting period, Contractors conducted activities in accordance with approved road safety management plans. Timely supervision and accompanying advice from the CSC Road Safety Engineer made it possible to ensure safety of road users and Contractor's personnel. During periods of the audit, relevant work was done by the Contractors for the installation of safety signs, widening of temporary roads, patching, preparation for carrying out activities for the winter maintenance of roads. Hazardous areas are marked with warning signs.
121. Briefings on safety and road safety are conducted daily with all working personnel, including driver's staff, operators of special equipment before departure to the site. Explanatory conversations are held with the workforce, directly at workplaces, on the rules and observance of safety and safe working methods.
122. The contractors have developed appropriate COVID-19 virus prevention measures. The health and safety plans include measures recommended by the local health department: strict control of outside visits to the town, observance of the mask regime, provision of personal protective equipment: medical masks, gloves, antiseptics. The thermometry procedures are performed several times during the day, observance of a physical distance of at least 1.5 meters in living quarters, in the canteen, sending personnel to remote work format. Control of room cleaning and surface treatment with disinfectants. Information and educational work among the personnel of companies and the design of medical stands with the actualization of visual information in the languages used in interpersonal communication of the personnel. In sanitary and hygienic places (sinks, showers, laundries, toilet rooms, etc.), soap, detergents and disinfectants are installed. A sufficient amount of disinfectants is provided in the catering units for the treatment of devices and instruments.
123. On the whole, the unprecedented measures taken allowed contractors not to slow down the pace of work and to preserve health of their workers.

4.7. Trainings

124. The CSC conducted training on issues related to the implementation of the EMP, monitoring of work at sites, regular health and safety instructions, AID/HIV issues as well as COVID-19 pandemic. Workers had on-the site trainings during accompanying consultation during environmental inspections of construction sites. In the course of the inspections, the ESs of CSC and PMC drew the attention of the environmental specialists of the contractors to the indicators for the implementation of environmental protection measures and explained how to identify potential risks of a negative environmental and local residents impacts. And also to pay attention to the risks associated with the spread of COVID 19.

5 FUNCTIONING OF THE SSEMP

5.1 Review of SSEMP

125. EMP of Lots 1,2 and 3 in the reporting period was not changed. The activities announced in the EMP were carried out by the contractors and in the proper order and quality. The EMP of Lot 2 was brought into line with ADB requirements. Water resources management activities were included.
126. The analysis of the work of environmental specialists of contracting organizations shows that during the reporting period they performed a sufficient amount of work on the site to ensure the implementation of the EMP. The environmental specialists on Lot 1 took measures to eliminate inconsistencies. The environmental specialists on Lot 3 did not provide the achieved result maintenance on the comments elimination of violations at the site of the local ACP in July, which re-resulted the previously identified inconsistencies in September.
127. During the reporting period, the environmental specialist on Lot 2 was unable to provide an industrial environmental monitoring for an independent laboratory due to the financial problems. Lot 1 and Lot 3 were able to conduct site visits and carry out instrumental measurements in July, August, September and October 2020.
128. Based on the results of corrective actions the CSC developed a series of measures for the subsequent period July-December 2020. Table 15 below presents the corrective actions to eliminate non-conformities for the period July-December 2020.

Table 15. Corrective Action Plan: Implementation Status July-December 2020.

Actions	Time-frame	Responsible	Action status
Ensure presence of the Engineer during the PEM Written notice about timing of PEM	According to the PEM schedule	Contractor's Environmental Specialist	Contractor Lot 1 and Lot 3 Written notification of the CSC about the planned visits for measurements
Reports for the PEM laboratory and contractor's reports should include information on solid waste management (volumes, type, classification of waste, disposal method, location, etc.) photo fixation with dates and time indicated on the photo for monitoring, sampling and instrumental measurements. Remove the prohibition on data use from the protocols of instrumental measurements.	July, August, September	Environmental Specialists on Lot 1, Lot 2 and Lot 3	Performed. The photos in the reports comply with work seasons, restrictions from the protocols are lifted.
To equip a pool on the territory of storage of fuels and lubricants with a concrete wall surface to contain 110% of the volume of the tank	October	Environmental Specialists on Lot 2 and Lot 3, OHS Specialists	As an alternative, Lot 2 ensured the control of mechanisms and the constant presence of an operator on site in July and August. For Lot 3, the action was not completed. There is local contamination of the site
Develop a final EMP for all three sites which will reflect measures for the reconstruction and restoration of areas used for temporary use	15.08.2020	Contractor's Environmental Specialist	In the process of work since the contract has been extended.

(construction camps, production sites, storage of materials, etc.)			Consultations of CNS and PMC provided to ecologists during remote communication
For Lot 2, include in the work plans measures for the restoration of the temporary bypass road after its closure	20.07.2020	Environmental Specialist on Lot 2, site manager	Performed on July 07, 2020
Outreach work for subcontracting personnel and service suppliers on environmental issues and EMP activities	For Lot 1 and Lot 3 Weekly in July, August and September. For Lot 2 - weekly in July, August	Environmental Specialists and medical staff of all lots	Completed on Lot 1 and Lot 3. Lot 2 works have been suspended since August.
Outreach work for subcontracting personnel and service suppliers on environmental issues and EMP activities	01.06.2020		Postponed due to emergency state and subsequent quarantines
Post-construction environmental audit	30.09.2020	CSC together with PMC	Postponed due to contract extension

5.2 Advanced methods (good practices)

129. On Lot1 and Lot 3: the practice of proper interaction with the local people is applied. Contractors formed good communication with local public. Contractors assisted local communities in providing personal protective equipment during the COVID 19 pandemic. This practice allowed the GRM to operate effectively at all sites. Not a single appeal was recorded on the sites. All issues are resolved on the site in a working order.

5.3 Opportunity for improvement

130. At the moment, such areas for this construction project have not been identified.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

131. The general approach followed for the Project is to use the most stringent standards in case of differences between international norms and the legislation of the Republic of Kazakhstan. In accordance with the IFC general environmental, health and safety guidelines, when host country regulations differ from the levels and measures presented in the guidelines, projects are expected to apply the most stringent requirements. In most cases, national RK standards are more stringent than EU and WHO standards, and therefore they were used in the impact assessment procedure.
132. Application of effective protective measures while implementation of project includes following:
- Construction waste removal and disposal was carried out according to work plans, with the provision of protective measures. All emissions to atmospheric air were within acceptable limits. Instrumental measurements did not show exceeding the permissible norms. In general, environmental specialists of Lot 1 and Lot 3 sections perform ongoing monitoring and ensure an effective system for implementation of the environmental management plan, given the difficult period in connection with the announcement of the state of emergency. But the absence of environmental specialist on the site affected the maintenance of the results obtained for Lot 3, which were subsequently reduced to zero, and during the audit in September, 2 significant inconsistencies were again recorded at the local ACP:
 - Proper planning of construction works, which allowed the Contractor not to accumulate a large amount of equipment in small areas, especially in sensitive areas. Constant adjustment of the work schedule of water sprinkler machinery, taking into account all factors affecting the process of dust generation;
 - Organizational structure that allows the environmental management system to work effectively. The organizational structure of contractors includes vertical and horizontal interactions and employees of line structures (headmen, foremen, etc.) are involved in this process. In the absence of an environmental specialist on the site, these communication links were able to ensure the required level of implementation of the EMP measures, with the exception of Lot 3;
 - Joint actions with local executive bodies (akimat, employees of the UAP TP) allowed releasing the tension situation associated with unauthorized opening of the road, which could cause the road accidents and incidents.
133. Work to ensure safety and security for the local residents was carried out in the necessary and sufficient volumes, which made it possible to prevent realization of risks in this area. During the reporting period, there were no road accidents and incidents on Lot 2, which is the result of the effective work of safety specialists and the effectiveness of the measures taken, as well as joint actions with external stakeholders.
134. 2 accidents were registered on Lot 1, 1 accident was registered on Lot 3. As a result of 3 road accidents, the injured were taken to medical institutions. There are no deaths. The accident data that took place in the reporting period is not influenced by the Project itself.
135. Specialists in protective measures: environmental specialists remotely, and health and safety engineers, road safety engineers, medical personnel directly on the sites provided conditions to prevent infection and prevent the spread of coronavirus on the sites, which made it possible to continue construction work without loss of personnel.

6.2 Recommendations

136. Environmental education of staff, explanations on the EMP measures should be carried out by environmental specialists on-line.

137. On Lot 2 during carrying out the measures to restore the life support of the construction camp, to review the Management Plan for the rotational camp as part of the EMP and make adjustments to the measures to ensure compliance with safety and environmental standards and rules.
138. Based on the results of the implementation of corrective actions for the period January-June 2020, as well as site monitoring and environmental audits in September and December 2020, the CSC developed a number of measures for the subsequent period January-June 2021. Table 16 below provides a corrective action plans.

Table 16. Corrective Action Plan Status January-June 2021

Actions	Time-frame	Responsible	Note
Mobilization of personnel to the site of Lot 2 and re-activation of the town	28.02.2021	Project Manager of Lot 2	To include the measure in PU by the rotational camp
Elimination of inconsistencies on Lot 3	31.03.2021	Site Environmental Specialists	Eliminate local contamination, instruct the fuel station operator to carry out, ensure control by safety specialists, Upgrade the fire shield at the gas station
Develop final EMP for all three sites which will reflect measures for the reconstruction and restoration of areas for temporary use (construction camps, production sites, storage of materials, etc.)	15.08.2021	Contractor's Environmental Specialist	CSC and PMC consultations
Conducting educational work among the personnel of subcontractors and service providers on environmental protection and EMP measures	Monthly	Environmental Specialist and medical personnel of all lots	Online and in small groups with respect to physical distance
Post-construction environmental audit	30.07.2021	CSC together with PMC	

**Results of laboratory tests of soil contamination on Lot 1
 performed by the testing laboratory of "IST-EKO" LLP on the basis of an agreement with the Contractor from
 05.01.2020 No. 109-1 / 11 / A-M**

Points Selection / measurements	Name of determined indicators	Before Project beginning 24.04.2018	17.07.2020	15.08.2020	18.09.2020	23.10.2020
km160	pH units	7,87	7,00	7,1	7,24	7,14
	Dense residue %	0,147	0,146	0,101	0,096	0,093
	Petroleum products(mg / kg)	0,01	81,0	75,0	79,0	77,8
	Chlorides(Mmol / 100 g)	0,05	1,5/0,053	0,23/0,008	0,25/0,009	0,25/0,009
	Sulphates(Mmol / 100 g)	0,462	1,5/0,074	0,318/0,015	0,332/0,016	0,297/0,014
	Calcium(Mmol / 100 g)	0,4	0,3/0,006	1,0/0,020	0,95/0,019	1,0/0,020
	Magnesium(Mmol / 100 g)	0,16	3,8/0,0046	1,75/0,0214	1,0/0,012	1,05/0,013
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	0,98	0,43/0,026	0,6/0,037	0,65/0,040	0,60/0,037
Km 170	pH units	7,82	7,32	7,07	7,13	7,3
	Dense residue %	0,150	0,098	-	0,099	0,086
	Petroleum products(mg / kg)	0,02	53	62,0	56,5	53,8
	Chlorides(Mmol / 100 g)	0,15	0,20/0,007	0,25/0,009	0,22/0,008	0,2/0,007
	Sulphates(Mmol / 100 g)	0,452	1,3/0,059	0,169/0,008	0,162/0,008	0,177/0,008
	Calcium(Mmol / 100 g)	0,7	0,35/0,007	2,75/0,055	2,38/0,048	2,0/0,040
	Magnesium(Mmol / 100 g)	0,6	0,6/0,0073	0,50/0,0061	0,63/0,008	0,55/0,007
	Carbonates(Mmol / 100 g)	0,08	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	26,0	0,29/0,018	0,4/0,024	0,45/0,027	0,40/0,024
Km 180	pH units	7,20	7,16	7,26	7,45	7,24
	Dense residue %	0,250	0,144	0,0094	0,081	0,082
	Petroleum products(mg / kg)	0,021	69,0	47,0	51,7	51,3
	Chlorides(Mmol / 100 g)	0,06	0,15/0,005	0,20/0,007	0,18/0,006	0,17/0,006
	Sulphates(Mmol / 100 g)	0,450	2,1/0,103	0,169/0,008	0,169/0,008	0,141/0,007
	Calcium(Mmol / 100 g)	1,12	0,2/0,004	2,0/0,040	1,5/0,030	1,38/0,028
	Magnesium(Mmol / 100 g)	5,05	0,7/0,085	1,0/0,0122	0,75/0,009	0,85/0,010
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	18,0	0,37/0,023	0,094	0,48/0,029	0,5/0,031
Km 190	pH units	7,22	6,97	7,19	7,45	7,6
	Dense residue %	0,250	0,093	0,081	0,087	0,081

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	Petroleum products(mg / kg)	0,024	49,0	49,0	52,3	50,0
	Chlorides(Mmol / 100 g)	0,06	0,4/0,014	0,30/0,011	0,031/0,011	0,32/0,011
	Sulphates(Mmol / 100 g)	0,440	0,4/0,02	0,177/0,008	0,191/0,009	0,205/0,010
	Calcium(Mmol / 100 g)	15,5	1,75/0,035	1,0/0,020	1,05/0,021	1,0/0,020
	Magnesium(Mmol / 100 g)	0,0	0,3/0,004	1,25/0,0153	1,0/0,012	0,75/0,009
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	18,0	0,33/0,020	0,45/0,027	0,55/0,034	0,5/0,031
Km 200	pH units	7,22	7,13	7,42	7,36	7,31
	Dense residue %	0,250	0,187	0,085	0,081	0,080
	Petroleum products(mg / kg)	0,024	33,0	38,0	36,4	40,3
	Chlorides(Mmol / 100 g)	0,06	2,0/0,071	0,35/0,012	0,35/0,012	0,32/0,011
	Sulphates(Mmol / 100 g)	0,440	1,6/0,078	0,191/0,009	0,198/0,009	0,219/0,011
	Calcium(Mmol / 100 g)	15,5	0,63/0,013	1,25/0,025	1,2/0,024	1,13/0,023
	Magnesium(Mmol / 100 g)	0,0	0,3/0,037	0,63/0,0076	0,5/0,006	0,65/0,008
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	18,0	0,34/0,021	0,5/0,031	0,49/0,030	0,45/0,027
Km 210	pH units	7,78	6,73	7,05	7,2	7,41
	Dense residue %	0,250	0,152	0,083	0,076	0,067
	Petroleum products(mg / kg)	0,024	47,0	56,0	53,8	54,17
	Chlorides(Mmol / 100 g)	0,06	1,8/0,064	0,4/0,014	0,38/0,013	0,35/0,012
	Sulphates(Mmol / 100 g)	0,439	0,3/0,63	0,184/0,009	0,177/0,008	0,169/0,008
	Calcium(Mmol / 100 g)	0,49	0,4/0,008	1,0/0,020	1,1/0,022	1,0/0,020
	Magnesium(Mmol / 100 g)	0,0	0,13/0,0015	0,75/0,0092	0,085/0,010	0,5/0,006
	Carbonates(Mmol / 100 g)	0,04	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	28	0,24/0,015	0,5/0,031	0,38/0,023	0,35/0,021
Km 220	pH units	7,86	7,84	7,62	7,57	7,19
	Dense residue %	0,260	0,144	0,078	0,027	0,066
	Petroleum products(mg / kg)	0,021	41,0	32,0	37,6	39,17
	Chlorides(Mmol / 100 g)	0,06	0,3/0,010	0,35/0,012	0,3/0,011	0,28/0,010
	Sulphates(Mmol / 100 g)	0,438	2,2/0,106	0,169/0,008	0,148/0,007	0,155/0,007
	Calcium(Mmol / 100 g)	0,50	0,36/0,007	0,75/0,015	0,9/0,018	0,75/0,015
	Magnesium(Mmol / 100 g)	0,0	0,23/0,0027	1,0/0,0122	0,75/0,009	0,8/0,010
	Carbonates(Mmol / 100 g)	0,03	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	26,0	0,30/0,018	0,5/0,031	0,45/0,027	0,4/0,024
Production Base "Zhaksymay"	pH units	7,80	7,97	7,63	7,81	7,64
	Dense residue %	0,144	0,222	0,134	0,116	0,107
	Petroleum products(mg / kg)	0,01	59	43	51,3	57,5

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Point 1	Chlorides(Mmol / 100 g)	0,04	0,3/0,04	0,35/0,012	0,30/0,011	0,29/0,010
	Sulphates(Mmol / 100 g)	0,282	3,1/0,148	0,360/0,017	0,311/0,015	0,275/0,013
	Calcium(Mmol / 100 g)	0,9	0,38/0,008	2,5/0,050	2,25/0,045	2,13/0,043
	Magnesium(Mmol / 100 g)	0,9	0,3/0,0037	1,25/0,015	1,13/0,014	1,0/0,012
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	0,08	0,37/0,023	0,65/0,04	0,5/0,031	0,48/0,029
Production Base "Zhaksymay" Point 2	pH, ед.	7,67	7,56	7,48	7,5	7,39
	pH units	0,150	0,20	0,083	0,078	0,084
	Dense residue %	0,01	74	62,0	69,0	65,8
	Petroleum products(mg / kg)	0,06	0,25/0,009	0,25/0,009	0,28/0,010	0,25/0,009
	Chlorides(Mmol / 100 g)	0,288	3,4/0,162	0,169/0,008	0,191/0,009	0,198/0,009
	Sulphates(Mmol / 100 g)	1,8	0,23/0,005	1,5/0,030	1,25/0,025	1,5/0,030
	Calcium(Mmol / 100 g)	0,8	0,63/0,0076	0,75/0,009	0,8/0,010	0,75/0,009
	Magnesium(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Carbonates(Mmol / 100 g)	0,08	0,28/0,017	0,45/0,027	0,04/0,024	0,45/0,027

Laboratory test result for water pollution, Lot 1 section

performed by the testing laboratory of "IST-EKO" LLP on the basis of an agreement with the Contractor from
 05.01.2020 No. 109-1 / 11 / A-M

Sampling points	Name of pollutants	MPC standard	Primary results 24.04.2018	18.07.2020	15.08.2020	17.09.2020	26.10.2020
Kenzhaly river	pH (units pH)	6,0-9,0	8,34	6,70	6,64	6,81	6,73
	Dry residue(mg / dm3)	Not more than 1500	41,50	1450,0	1494,0	1496,0	1491
	Water insoluble matter(mg / dm3)	Not standardized	20	19	19	18	20
	Chlorides(mg / dm3)	Not more than 350	2 835,0	348,33	346,63	343,14	344,95
	Ammonia nitrogen(mg / dm3)	Not standardized	9,05	0,32	0,1	0,1	0,11
	Petroleum products(mg / dm3)	Not more than 0.1	0,06	0,0089	0,0080	0,0085	0,007
	Total hardness (mg.eq / dm3)	Not standardized	7,5	18,4	18,8	21,25	17,0
	Calcium(mg / dm3)	Not standardized	560	156,0	159,0	225,0	194,0
	Magnesium(mg / dm3)	Not standardized	564	127,2	130,2	120,0	87,7
	Sulphates(mg / dm3)	Not more than 500	878	498,70	479,62	498,86	496,80
	Nitrates(mg / dm3)	Not more than 45	0,223	<0,1	<0,1	0,1	<0,1
	Nitrite(mg / dm3)	Not more than 3.3	0,672	0,012	0,008	0,010	0,019
	Iron(mg / dm3)	Not more than 0,3	1,75	0,10	0,08	0,09	0,11
	Chromium(mg / dm3)	Not more than 0.05	00	<0,025	<0,025	0,025	<0,025
	Total phosphorus(mg / dm3)	Not standardized	0,0	0,019	0,0013	0,017	0,036

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	APAV(mg / dm3)	Not standardized	0,07	<0,025	<0,025	<0,025	<0,025
Shieli river	pH (units pH)	6,0-9,0	7,86	6,10	6,14	6,12	6,8
	Dry residue(mg / dm3)	Not more than 1500	41,38	870,00	978,0	819,0	846,0
	Water insoluble matter(mg / dm3)	Not standardized	13,0	18,5	18	17,5	19
	Chlorides(mg / dm3)	Not more than 350	182,4	203,33	242,31	255,64	235,58
	Ammonia nitrogen(mg / dm3)	Not standardized	6,93	<0,80	0,14	0,76	0,63
	Petroleum products(mg / dm3)	He более 0.1	0,04	0,0081	0,013	0,0099	0,0087
	Total hardness (mg.eq / dm3)	Not standardized	6,4	5,3	6,1	5,75	6,0
	Calcium(mg / dm3)	Not standardized	78,0	75,5	77,0	72,5	74,0
	Magnesium(mg / dm3)	Not standardized	30	33,3	27,0	25,2	27,6
	Sulphates(mg / dm3)	Not more than 500	272	303,50	344,70	341,80	348,63
	Nitrates(mg / dm3)	Not more than 45	0,254	<0,1	<0,1	<0,1	<0,1
	Nitrite(mg / dm3)	Not more than 3.3	0,072	0,039	0,017	0,032	0,025
	Iron(mg / dm3)	Not more than 0,3	1,12	0,13	0,10	0,12	0,15
	Chromium(mg / dm3)	Not more than 0.05	0,0	<0,025	<0,025	<0,025	<0,025
	Total phosphorus(mg / dm3)	Not standardized	0,0	0,68	0,42	0,55	0,46
	APAV(mg / dm3)	Not standardized	0,02	0,26	<0,025	<0,025	0,025

Results of measurements of atmospheric air, Lot 1

performed by the testing laboratory of "IST-EKO" LLP on the basis of an agreement with the Contractor from
 05.01.2020 No. 109-1 / 11 / A-M

Sampling points	Name of pollutants	Actual concentration Initial measurement before beginning of the Project, 24.04.2018, mg/m ³	MPC standard, mg/m ³	Concentration of substances during measurement periods, mg/m ³			
				17.07.2020 mg/m ³	15.08.2020 mg/m ³	18.09.2020 mg/m ³	26.10.2020 mg/m ³
Km 160	Inorganic dust 70-20%	0,063	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,062	0,2	0,0475	0,0433	0,0455	0,0467
	Sulfur dioxide SO ₂	n/d	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	1,2	5,0	1,5	1,5	1,5	1,5
	CH ₂ O formaldehyde	0,0013	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,093	1	0,5	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,060	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,079	0,2	0,1	0,1	0,1	0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	0,3	0,3	0,3	0,3
	Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
Km 170	Inorganic dust 70-20%	0,0363	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,0062	0,2	0,0464	0,0442	0,0461	0,0463
	Sulfur dioxide SO ₂	n/a	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	1,2	5,0	1,5	1,5	1,5	1,5
	CH ₂ O formaldehyde	0,0013	0,051	0,0015	0,0015	0,015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,093	1	-	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,060	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,079	0,2	0,1	0,1	0,1	0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	0,3	0,3	0,3	0,3
	Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004

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Km 180	Inorganic dust 70-20%	0,061	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,063	0,2	0,0473	0,0451	0,0473	0,0469
	Sulfur dioxide SO ₂	n/a	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	1,3	5,0	1,5	1,5	1,5	1,5
	CH ₂ O formaldehyde	0,0012	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,095	1	0,5	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,063	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,081	0,2	0,1	0,1	0,1	0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,2	0,6	0,3	0,3	0,3	0,3
	Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
Km 190	Inorganic dust 70-20%	0,063	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,060	0,2	0,0464	0,0443	0,0456	0,0465
	Sulfur dioxide SO ₂	n/d	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	1,4	5,0	1,5	1,5	1,5	1,5
	CH ₂ O formaldehyde	0,0013	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,097	1	0,5	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,65	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,082	0,2	0,1	0,1	0,1	0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	0,3	0,3	0,3	0,3
	Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
Km 200	Inorganic dust 70-20%	0,065	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,062	0,2	0,0482	0,0461	0,0478	0,0466
	Sulfur dioxide SO ₂	n/a	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	1,5	5,0	1,5	1,5	1,5	1,5
	CH ₂ O formaldehyde	0,0014	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,099	1	0,5	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,067	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,083	0,2	0,1	0,1	0,1	0,1

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		Methylbenzene C ₅ H ₆ -CH ₃	0,4	0,6	0,3	0,3	0,3	0,3
		Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
Km 210		Inorganic dust 70-20%	0,067	0,3	0,05	0,05	0,05	0,05
		Nitrogen dioxide NO ₂	0,064	0,2	0,0469	0,0442	0,0459	0,0463
		Sulfur dioxide SO ₂	n/a	0,5	0,025	0,025	0,025	0,025
		Carbon monoxide CO	1,6	5,0	1,5	1,5	1,5	1,5
		CH ₂ O formaldehyde	0,0013	0,051	0,0015	0,0015	0,0015	0,0015
		Hydrocarbons C ₁₂ -C ₁₉	0,1	1	0,5	0,5	0,5	0,5
		Benzene, C ₆ H ₆	0,069	0,3	0,05	0,05	0,05	0,05
		Xylene C ₈ H ₁₀	0,085	0,2	0,1	0,1	0,1	0,1
		Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	0,3	0,3	0,3	0,3
		Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
Km 220		Inorganic dust 70-20%	0,068	0,3	0,05	0,05	0,05	0,05
		Nitrogen dioxide NO ₂	0,065	0,2	0,0476	0,0436	0,0467	0,0469
		Sulfur dioxide SO ₂	n/d	0,5	0,025	0,025	0,025	0,025
		Carbon monoxide CO	1,7	5,0	1,5	1,5	1,5	1,5
		CH ₂ O formaldehyde	0,0014	0,051	0,0015	0,0015	0,0015	0,0015
		Hydrocarbons C ₁₂ -C ₁₉	0,1	1	0,5	0,5	0,5	0,5
		Benzene, C ₆ H ₆	0,070	0,3	0,05	0,05	0,05	0,05
		Xylene C ₈ H ₁₀	0,087	0,2	0,01	-		0,1
		Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	0,3	0,3	0,3	0,3
		Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
PB Zhaksy mai ACP		Inorganic dust and Suspended particles from June	0,0402	0,3	0,075	-	0,075	0,075
		Nitrogen dioxide NO ₂	0,0301	0,2	0,0471	0,044	0,0451	0,0451
		Sulfur dioxide SO ₂	n/d	0,5	0,025	0,025	0,025	0,025
		Carbon monoxide CO	1,7	5,0	1,66	1,69	1,71	1,71

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		CH ₂ O formaldehyde	0,0013	0,051	0,0015	0,001	0,0015	0,0015
		Hydrocarbons C ₁₂ -C ₁₉	0,1	1	0,5	0,5	0,5	0,5
		Benzene, C ₆ H ₆	n/a	0,3	n/o	n/o	n/o	n/o
		Xylene C ₈ H ₁₀	n/a	0,2	n/o	n/o	n/o	n/o
		Methylbenzene C ₅ H ₆ -CH ₃	n/a	0,6	n/o	n/o	n/o	n/o
		Hydrogen sulfide, H ₂ S	n/a	0,008	0,004	0,004	0,004	0,004
PB Zhakysy mai CBP		Inorganic dust and Suspended particles from May	Was not planned	0,3	0,075	0,075	0,075	0,075
		Nitrogen dioxide NO ₂		0,2	0,0466	0,0453	0,0461	0,0461
		Sulfur dioxide SO ₂		0,5	0,025	0,025	0,025	0,025
		Carbon monoxide CO		5,0	1,68	1,74	1,68	1,68
		CH ₂ O formaldehyde		0,051	0,0015	0,0015	0,0015	0,0015
		Hydrocarbons C ₁₂ -C ₁₉		1	0,5	0,5	0,5	0,5
		Benzene, C ₆ H ₆		0,3	n/o	n/o	n/o	n/o
		Xylene C ₈ H ₁₀		0,2	n/o	n/o	n/o	n/o
		Methylbenzene C ₅ H ₆ -CH ₃		0,6	n/o	n/o	n/o	n/o
		Hydrogen sulfide, H ₂ S		0,008	0,004	0,004	0,004	0,004
Residential area								
Shubarkuduk windward		Inorganic dust: 70-20%	0,0398	0,3	0,05	0,05	0,05	0,05
		Nitrogen dioxide	0,0268	0,2	0,0463	0,0436	0,0438	0,0451
		Sulphur dioxide	n/d	0,5	0,025	0,025	0,025	0,025
		Carbon monoxide	1,6	5,0	1,64	1,56	1,51	1,65
		Formaldehyde	0,0012	0,051	0,0015	0,0015	0,0015	0,0015
		Hydrocarbons C ₁₂ -C ₁₉	0,99	1	0,5	0,5	0,5	0,5
		Hydrogen sulphide	n/a	0,008	0,004	0,004	0,004	0,004
		Inorganic dust: 70-	0,04	0,3	0,05	0,05	0,03	0,05

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	Shubark uduk leeward	20%					
		Nitrogen dioxide	0,0270	0,2	0,04773	0,0455	0,0448
		Sulphur dioxide	n/d	0,5	0,025	0,025	0,025
		Carbon monoxide	1,7	5,0	1,73	1,63	1,72
		Formaldehyde	0,0012	0,051	0,0015	0,0015	0,0015
		Hydrocarbons C12- C19	0,1	1	0,5	0,5	0,5
		Hydrogen sulphide	n/a	0,008	0,004	0,004	0,004
	Kopa windwar d	Inorganic dust: 70- 20%	0,0398	0,3	0,05	0,05	0,05
		Nitrogen dioxide	0,0312	0,2	0,0461	0,0447	0,0444
		Sulphur dioxide	n/d	0,5	0,025	0,025	0,025
		Carbon monoxide	1,5	5,0	1,61	1,55	1,61
		Formaldehyde	0,0013	0,051	0,0015	0,0015	0,0015
		Hydrocarbons C12- C19	0,099	1	0,5	0,5	0,5
		Hydrogen sulphide	n/d	0,008	0,004	0,004	0,004
	Kopa leeward	Inorganic dust: 70- 20%	0,0402	0,3	0,05	0,05	0,05
		Nitrogen dioxide	0,0315	0,2	0,0468	0,0451	0,0463
		Sulphur dioxide	n/d	0,5	0,025	0,025	0,025
		Carbon monoxide	1,5	5,0	1,71	1,61	1,68
		Formaldehyde	0,0014	0,051	0,0015	0,0015	0,0015
		Hydrocarbons C12- C19	0,1	1	0,5	0,5	0,5
		Hydrogen sulphide	n/d	0,008	0,004	0,004	0,004
	PB Zhaksy mai	Suspended substances		0,3	0,075	0,075	0,05
		Nitrogen dioxide	0,0315	0,2	0,0455	0,0466	0,0451
		sulphur dioxide	n/o	0,5	0,025	0,025	0,025
		Carbon oxide	1,5	5,0	1,75	1,77	1,71
		Formaldehyde	0,0014	0,051	0,0015	0,0015	0,0015

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	Hydrocarbons C12-C19	0,1	1	0,5	0,5	0,5	0,5
	Hydrogen sulfide	n/d	0,008	0,004	0,004	0,004	0,004
PB Zhaksy mai railway dead end	Inorganic dust: 70-20%		0,3	0,075	0,3	0,3	0,075
	Nitrogen dioxide	0,0315	0,2	0,0471	0,0448	0,0458	0,0458
	Sulphur dioxide	n/o	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide	1,5	5,0	1,61	1,58	1,63	1,63
	Formaldehyde	0,0014	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C12-C19	0,1	1	0,5	0,5	1,0	0,5
	Hydrogen sulphide	n/d	0,008	0,004	0,004	0,004	0,004
PB Zhaksy mai bitumen pit	Inorganic dust: 70-20%	Not planned	0,3	0,075	0,075	0,075	0,075
	Nitrogen dioxide		0,2	0,0458	0,0466	0,0463	0,0471
	Sulphur dioxide		0,5	0,025	0,025	0,025	0,025
	Carbon monoxide		5,0	1,66	1,79	1,66	1,72
	Formaldehyde		0,051	0,0015	0,015	0,0015	0,0015
	Hydrocarbons C12-C19		1	0,5	0,5	0,5	0,5
	Hydrogen sulphide		0,008	0,004	0,004	0,004	0,004

Annex 4

Summary data from environmental monitoring checklists

Lot 1

Environmental monitoring checklist

Checklist for Lot 1 site inspection		
Date of site visit: 15.09.2020 18.12.2020	Engineer's representative: Imbarova Sara Contractor's representative: Nugymanov Amanserik – SH and TS Engineer Gordov Vasiliy Production Base head	Engineer's ref.No. Contractor's ref.No.
Weather Conditions: 18 0C south wind 3.5 m/s		
Work currently in progress:		
The problems related to environment	Possible reasons	Proposed measures to reduce the risk
Absence of Environmental specialist on the site	Remote work due to the quarantine measures	On-line training of the engineering staff on the site for environmental monitoring skills

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
Contractor's base camp						
1		<input type="checkbox"/>				Septic tanks are cleaned daily
2	All wastewater is sent to septic tanks or service water tanks	<input type="checkbox"/>				Control by the environmental specialist on the ACP site
3	All the dangerous liquids stored in a prescribed place on an impermeable base with effluent collection			<input type="checkbox"/>		
4	Solid hazardous materials are stored in a safe place in the work areas	<input type="checkbox"/>				Concrete specialized sites are organized, barriers were installed for the storage of hazardous materials in accordance with the requirements.
5	Drains accumulate in the drainage system and are disposed of by the Contractor	<input type="checkbox"/>				According to the EMP
6	All vehicles entering and leaving the base camp are subject to control	<input type="checkbox"/>				Mechanic and OHS inspector
7	Local communities and organizations are informed of the construction schedule and any noise-raising activities on a regular basis through workers and other activities	<input type="checkbox"/>				Communication by telephone during the reporting period, Monthly meetings in Akimat

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No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
						canceled due to the quarantine
8	Open containers for storage of materials are covered with canopies	<input type="checkbox"/>				Containers are installed with covers
9	Open burning is prohibited	<input type="checkbox"/>				constant monitoring is provided by security specialists
10	Fire Fighting equipment <ul style="list-style-type: none"> ▪ Sand bucket and shovel ▪ Foam extinguisher ▪ Protective covering 	<input type="checkbox"/>	<input type="checkbox"/>			Replacing fire extinguishers according to marks on fire extinguishers. Monitoring by security specialists.
11	Access of other people to the town is prohibited by the installation of fencing and security organizing	<input type="checkbox"/>				At the gate is the checkpoint, the contract with the security company. An instruction has been developed for the procedure for admission to the site in connection with quarantine in the region
12	All employees are provided with personal protective equipment (PPE)	<input type="checkbox"/>				it is required to form an irreducible supply of PPE: medical masks, gloves, antiseptics. And also medicines
13	Smoking is prohibited except in Smoking rooms	<input type="checkbox"/>				Repairing territory has a designated smoking area.
14	Relevant road signs and warning signs on the site and in hazardous areas	<input type="checkbox"/>				According to traffic safety plans
15	Drinking water is provided to all employees from commercial and licensed sources.	<input type="checkbox"/>				OHS specialist controls the norms in accordance with the season
16	Protective clothes of all employees are washed on a daily basis	<input type="checkbox"/>				Protective clothes of employees are washed as necessary according to the requirements and standards
17	All employees are provided with three meals a day	<input type="checkbox"/>				All residents in the construction camp. Local workers are provided with a hot lunch and drinking water.
18	Canteen with sanitary conditions in base camp	<input type="checkbox"/>	<input type="checkbox"/>			Sanitary days are held. For Lot 1, instructions were issued to eliminate violations in the commodity neighborhood, on the processing of devices

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
19	First-aid posts and first-aid kit in base camp and in the working areas	<input type="checkbox"/>				First aid kits are replenished as needed. The records of requests for medical care is kept
20	Health of all employees is under control of the doctor in base camp, and the corresponding services are provided, monthly medical examinations are also carried out	<input type="checkbox"/>				In the medical point installed video surveillance for the daily control of the workers and maintained the daily log of the medical examination (Alcotest, pressure, etc.).
21	The whole area is cleared, there is no excess waste, except for designated areas for waste disposal	<input type="checkbox"/>				Base camp territory is cleaned daily from the excess of solid waste, and stored in the designated area. Instructions have been issued for alignment according to the waste work plans (as part of the project EMP)
22	Providing a place for rest in base camp	<input type="checkbox"/>				There are rest rooms
23	Child labour (below 15 years)	<input type="checkbox"/>				Not applicable on site
Production site						
1	The bitumen and chemical materials warehouse is located away from the watercourse and the dam walls are impenetrable and can contain 110% of the tank volume	<input type="checkbox"/>				
2	Liquid waste from the asphalt plant are kept in the established tank and they emptied specialised suction equipment ≤MTTSTH≥ Lyman	<input type="checkbox"/>				Export by a specialized company for disposal has been organized. Reuse of liquid waste for dust suppression.
3	Bitumen is stored in a specialised place and bent in concrete to a volume of 110%	<input type="checkbox"/>				Bitumen pit is concreted Used periodically
4	Solid waste from the asphalt plant is stored at the designated places and disposed of in accordance with approved procedures	<input type="checkbox"/>				With the periodic export for disposal on landfill
5	The area of the plant is engraved for the purpose of reducing dust	<input type="checkbox"/>				
6	The area of the plant is watered for the purpose of reducing dust	<input type="checkbox"/>				According to the schedule of dust control

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
7	The plant cannot discharge wastewater into any watercourse; impervious concrete pools will be built to receive such water	<input type="checkbox"/>				Concreting of a pit for pumping out and re-using waste for dust suppression completed
8	All workers of asphalt, concrete plant and crusher are provided with protective masks	<input type="checkbox"/>				All provided with masks and overalls.
9	All workers of asphalt, concrete plant and crusher use protective masks	<input type="checkbox"/>		<input type="checkbox"/>		Employees were instructed to improve production culture and work safety
10	Sands and fractions for concrete and asphalt are stored in a wet and covered place	<input type="checkbox"/>				
11	In asphalt, concrete plants and crushers there are fire-Figurehting equipment	<input type="checkbox"/>				Fully understaffed
12	Plant or equipment causing high levels of vibration are built properly, maintained and managed accordingly	<input type="checkbox"/>				In accordance with technical regulations
13	River/canal fenced for the protection of water resources		<input type="checkbox"/>			No need
GAS STATION						
1	Refueling will be strictly controlled and allowed only at the gas station and workshop	<input type="checkbox"/>				
2	Space for storage tanks of fuel protected, and they are impermeable, tank cover closed	<input type="checkbox"/>				
3	Gas station equipped with fire-fighting equipment to be checked weekly	<input type="checkbox"/>				The inspection schedule is being observed. Continuous monitoring by TB is required The fire shield is not completed, there is no control from the side of OHS specialist
4	The gas station has warning signs	<input type="checkbox"/>				Absent
5	The gas station is equipped with a special basket for excess waste	<input type="checkbox"/>				Absent
Contractor's workshop and car wash						
1	Liquid hazardous materials are stored in the designated place in workshop	<input type="checkbox"/>				The site is concreted
2	Solid hazardous materials are stored in the designated place in the workshop	<input type="checkbox"/>				

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
3	There are special containers for the collection of used petroleum products and hydraulic fluids	<input type="checkbox"/>				Provided in places of possible spill
4	The used petroleum products are collected in a concreted canister with a volume of up to 110% and the canisters are cleaned in accordance with the approved procedures	<input type="checkbox"/>				
5	The workshop is equipped with a drainage system	<input type="checkbox"/>				
6	Each transport is inspected and maintained on an ongoing basis	<input type="checkbox"/>				Chief mechanic under the supervision of a OHS specialist
7	All construction equipment complies with European Standards and is equipped with modern noise suppression equipment		<input type="checkbox"/>	<input type="checkbox"/>		
8	The noise suppression equipment of all equipment is checked and maintained in accordance with the approved procedures		<input type="checkbox"/>	<input type="checkbox"/>		There is no such equipment available. Schedule of work in the objects with high noise and vibration levels introduced
9	All workshop workers are provided with welding equipment and personal protective equipment	<input type="checkbox"/>				
10	All technical water is collected in the concreted tank and the tank is cleaned in accordance with the approved procedures	<input type="checkbox"/>		<input type="checkbox"/>		Performed in April 2020
The Project Road						
1	All the roads targeted for construction work watered with the water truck	<input type="checkbox"/>				The intensity of irrigation and the number of water carriers have been increased, and constant monitoring of transit areas near settlements has been ensured
2	On the project road in appropriate places there are flags for the passage of cattle, sheep and other animals	<input type="checkbox"/>				warning signs in areas for cattle creep are installed
3	Sections of culverts and bridges, equipped with safety tapes and twisting signs	<input type="checkbox"/>				
4	Fencing and access control services are installed at all workplaces where it is necessary	<input type="checkbox"/>				
5	Storage of waste of any type, as well as Parking of transports is not allowed	<input type="checkbox"/>				

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
	at a distance of 100 m from any flow (including drainage or irrigation facilities)					
6	Work areas and hazardous areas are equipped with all relevant road signs and warning signs	<input type="checkbox"/>				
7	Construction machinery and plants are properly maintained to reduce gas emissions	<input type="checkbox"/>				According to the schedule of PEM are monitoring emissions
8	Noise control measures in special facilities	<input type="checkbox"/>				PPE provided: ear plugs
Borrow pits						
1	Quarries are provided with temporary drainage	<input type="checkbox"/>				Excavation from quarries are not performed
2	200 m from the nearest settlements, all construction work stopped from 22: 00 to 6: 00 a.m.	<input type="checkbox"/>				Excavation from quarries are not performed
3	Crushed stone of all size are extracted only from approved quarries	<input type="checkbox"/>				Excavation from quarries are not performed
4	Extraction of crushed stone fraction is carried out in 100 m from the river or watercourse					No fact
5	Stack does not exceed 3 m in height	<input type="checkbox"/>				Excavation from quarries are not performed
6	All open-body vehicles are used for the transportation of materials with possible dust formation, designed for these purposes with well-chosen folding bodies	<input type="checkbox"/>				The control of the senior mechanic
7	During the construction works the volume of noise is limited according to national standards	<input type="checkbox"/>				
8	Materials with possible dust formation do not load exceeding the level of folding bodies and close with a clean tarpaulin	<input type="checkbox"/>				
9	All vehicles, production equipment and devices comply with Euro exhaust emission standards		<input type="checkbox"/>			Equipment rented from villagers does not meet the standards
10	All temporary acquired lands are restored		<input type="checkbox"/>	<input type="checkbox"/>		Upon completion of construction works. Reclamation of 80% of the planned work volume was carried out at quarry No. 1
11	All material residues and contaminated land are collected and disposed of in accordance with approved procedures	<input type="checkbox"/>				Executed in response to Engineer comments

No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
12	During the delivering and using materials, it is watering	<input type="checkbox"/>				Control by the environmental specialist
13	Any direct sites damaged as a result of a dump of soil, are restored to an original look	<input type="checkbox"/>				
14	The riverbanks are protected from the contractor's materials storages or temporary stacks	<input type="checkbox"/>				
15	The negative effects or disruption due to construction work is monitored, with an acceptable level in accordance with the standards	<input type="checkbox"/>				Control by the ecologist and project Manager
16	Access road to quarries, quarries, borrow pits and traffic conditions are serviced according to the approved standards	<input type="checkbox"/>				Excavation from quarries are not performed
17	Draining and draining water, avoiding flooding or causing damage to other works or services causing erosion	<input type="checkbox"/>				
Flora and Fauna						
1	Trees and shrubs that are outside the construction site, but within the road reserve, are usually protected from damage	<input type="checkbox"/>				
2	None of the ancient trees were cut down during the construction works					On the territory of the construction site there are no ancient plantations
3	Cutting is not carried out without the prior permission of the relevant local authorities	<input type="checkbox"/>				During the reporting period, there is no need to cut down plantations
4	Trees and bushes are cut down and removed only if they interfere with the necessary temporary or permanent work					Trees and bushes do not interfere with construction, so cutting down is not required
5	Construction work is not carried out on the construction sites of the bridge during the harvest (specify Yes or No construction work in the transition, specify the date)		<input type="checkbox"/>			The construction of bridges does not affect the cultivation and harvesting, as they are located in remote places.
6	Construction on river sections occurs only during low flow to minimize pollution	<input type="checkbox"/>				

Annex 5

Laboratory test results of for soil contamination, Lot 3

performed by the testing laboratory of "IST-EKO" LLP on the basis of an agreement with the Contractor from
 05.01.2020 No. 109-1 / 11 / A-M

Points Selection / measurements	Name of determined indicators	Before Project be 24.04.2018	17.07.2020	14.08.2020	17.09.2020	23.10.2020
km 275	pH units	7,80	7,63	7,05	7,27	7,4
	Dense residue %	0,257	0,254	0,113	0,105	0,105
	Petroleum products(mg / kg)	0,020	77,0	75,0	50,4	53,0
	Chlorides(Mmol / 100 g)	0,07	0,45/0,016	0,15/0,005	0,18/0,006	0,20/0,007
	Sulphates(Mmol / 100 g)	0,448	4,3/0,212	0,91/0,044	0,88/0,042	0,85/0,041
	Calcium(Mmol / 100 g)	0,50	0,7/0,014	0,75/0,015	0,88/0,018	0,75/0,015
	Magnesium(Mmol / 100 g)	0,0	0,45/0,0055	1,25/0,0153	1,0/0,012	0,88/0,011
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	27,0	0,20/0,012	0,55/0,031	0,45/0,027	0,5/0,031
km 285	pH units	7.30	7,3	7,12	7,04	7,13
	Dense residue %	0.215	0,301	0,083	0,08	0,076
	Petroleum products(mg / kg)	0.027	39,0	43,00	47,0	49,8
	Chlorides(Mmol / 100 g)	0.251	0,35/0,012	0,25/0,009	0,19/0,007	0,23/0,008
	Sulphates(Mmol / 100 g)	0.453	4,4/0,212	0,35/0,017	0,36/0,017	0,34/0,016
	Calcium(Mmol / 100 g)	0.86	2,5/0,050	0,63/0,013	0,5/0,010	0,63/0,013
	Magnesium(Mmol / 100 g)	0.70	0,5/0,0061	1,1/0,0134	0,75/0,009	0,63/0,008
	Carbonates(Mmol / 100 g)	0.072	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	56.0	0,35/0,021	0,5/0,031	0,6/0,037	0,5/0,031
km300	pH units	7,32	6,96	7,03	7,32	7,27
	Dense residue %	0,279	0,283	0,142	0,129	0,137
	Petroleum products(mg / kg)	0,017	53,0	61,0	42,6	1\49,3
	Chlorides(Mmol / 100 g)	0,09	0,6/0,021	0,2/0,007	0,22/0,008	0,25/0,009

	Sulphates(Mmol / 100 g)	0,470	4,6/0,219	1,23/0,059	1,18/0,057	1,29/0,062
	Calcium(Mmol / 100 g)	0,78	0,4/0,008	0,75/0,015	0,75/0,015	1,13/0,023
	Magnesium(Mmol / 100 g)	1,6	1,0/0,0122	0,5/0,0061	0,5/0,006	0,5/0,006
	Carbonates(Mmol / 100 g)	0,2	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	28,0	0,0037/0,023	0,9/0,055	0,7/0,043	0,6/0,037
km 310	pH units	6.40	7,06	7,15	7,4	7,56
	Dense residue %	0.223	0,277	0,192	0,178	0,166
	Petroleum products(mg / kg)	0.021	14,0	24,0	19,8	28,6
	Chlorides(Mmol / 100 g)	0.238	0,25/0,009	0,25/0,009	0,28/0,010	0,25/0,009
	Sulphates(Mmol / 100 g)	0.420	4,4/0,212	1,39/0,067	1,27/0,061	1,23/0,059
	Calcium(Mmol / 100 g)	0.72	1,13/0,023	1,25/0,025	1,1/0,022	1,0/0,020
	Magnesium(Mmol / 100 g)	0.69	0,63/0,0076	0,75/0,0092	1,0/0,012	0,88/0,011
	Carbonates(Mmol / 100 g)	0.082	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	50.0	0,41/0,025	1,35/0,082	1,2/0,073	1,1/0,067
km 320	pH units	7,20	7,39	7,48	7,51	7,84
	Dense residue %	0,250	0,183	0,112	0,099	0,100
	Petroleum products(mg / kg)	0,017	51,0	39,0	43,0	46,3
	Chlorides(Mmol / 100 g)	0,08	0,60/0,021	0,3/0,0011	0,29/0,010	0,3/0,011
	Sulphates(Mmol / 100 g)	0,462	2,3/0,110	0,74/0,036	0,68/0,033	0,7/0,034
	Calcium(Mmol / 100 g)	0,71	0,95/0,019	1,20/0,024	1,0/0,020	1,25/0,025
	Magnesium(Mmol / 100 g)	1,1	0,5/0,0061	0,55/0,0067	0,45/0,005	0,5/0,006
	Carbonates(Mmol / 100 g)	0,08	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	32,0	0,45/0,027	0,55/0,034	0,5/0,031	0,4/0,024
km 330 primary measurement on 28.05.2020	pH units	7,99	8,04	7,96	7,7	7,47
	Dense residue %	0,15	0,179	0,085	0,079	0,080
	Petroleum products(mg / kg)	50,0	45,0	52,0	49,2	50,7
	Chlorides(Mmol / 100 g)	0,52/0,185	0,4/0,016	0,25/0,009	0,24/0,009	0,23/0,008
	Sulphates(Mmol / 100 g)	2,65//0,127	2,4/0,115	0,43/0,021	0,42/0,020	0,44/0,021
	Calcium(Mmol / 100 g)	1,35/0,028	1,1/0,022	0,075/0,015	0,63/0,013	0,75/0,015
	Magnesium(Mmol / 100 g)	0,73/0,009	0,38/0,0046	0,75/0,0092	0,63/0,008	0,7/0,009
	Carbonates(Mmol / 100 g)	0,0	0,0	0,0	0,0	0,0

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	Bicarbonate(Mmol / 100 g)	0,20/0,012	0,34/0,021	0,5/0,031	0,48/0,029	0,45/0,027
PB Nogaity 1 point	pH units	7,33	8,02	7,69	7,81	
	Dense residue %	0,194	0,136	0,064	0,059	7,54
	Petroleum products(mg / kg)	0,028	57,0	45,0	53,4	0,05652,6
	Chlorides(Mmol / 100 g)	0,253	0,3/0,011	0,2/0,007	0,18/0,006	0,15/0,005
	Sulphates(Mmol / 100 g)	0,471	1,9/0,091	0,346/0,017	0,332/0,016	0,30/0,015
	Calcium(Mmol / 100 g)	0,82	0,3/0,006	0,8/0,016	0,75/0,015	0,63/0,013
	Magnesium(Mmol / 100 g)	0,75	0,63/0,0076	0,75/0,0092	0,5/0,006	0,63/0,008
	Carbonates(Mmol / 100 g)	0,090	0,0	0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)	68,0	0,33/0,020	0,25/0,015	0,27/0,016	0,25/0,015
PB Nogaity 2 point	pH units			7,54	7,63	7,7
	Dense residue %			0,066	0,062	0,064
	Petroleum products(mg / kg)			63,00	70,5	68,3
	Chlorides(Mmol / 100 g)			0,2/0,007	0,21/0,007	0,20/0,007
	Sulphates(Mmol / 100 g)			0,438/0,021	0,424/0,020	0,44/0,021
	Calcium(Mmol / 100 g)			0,88/0,018	0,7/0,014	0,75/0,015
	Magnesium(Mmol / 100 g)			0,7/0,0085	0,6/0,007	0,5/0,006
	Carbonates(Mmol / 100 g)			0,0	0,0	0,0
	Bicarbonate(Mmol / 100 g)			0,20/0,012	0,23/0,014	0,24/0,015

Results of measurements of atmospheric air, Lot 3

performed by the testing laboratory of "IST-EKO" LLP on the basis of an agreement with the Contractor from
 05.01.2020 No. 109-1 / 11 / A-M

Sampling points	Name of pollutants	Actual concentration Initial measurement before beginning of the Project 24.04.18 mg/m ³	MPC standard, mg/m ³	Concentration, mg/m ³			
				17.07.2020	14.08.2020	17.09.2020	23.10.2020
ACP section	Suspended particles	Not determined	0,3	0,075	0,075	0,075	0,075
	Nitrogen dioxide NO ₂	n/o	0,2	0,0458	0,0468	0,0476	0,0451
	Sulfur dioxide SO ₂	1,6	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide CO	0,0012	5,0	1,63	1,76	1,62	1,71
	Formaldehyde CH ₂ O	0,2	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	n/d	1	0,5	0,5	0,5	0,5
	Hydrogen sulfide, H ₂ S	0,0401	0,008	0,004	0,004	0,004	0,004
CBP section	Suspended particles	No measurements	0,3	0,075	0,069	0,075	0,077
	Nitrogen dioxide NO ₂		0,2	0,0479	0,0479	0,0474	0,0474
	Sulfur dioxide		0,5	0,025	0,025	0,025	0,025
	Carbon monoxide		5,0	1,68	1,72	1,65	1,63
	Formaldehyde CH ₂ O		0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉		1	0,5	0,5	0,5	0,5

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	Hydrogen sulfide, H ₂ S		0,008	0,004	0,004	0,004	0,004
Railway dead end	Suspended particles		0,3	0,075	0,075	0,075	0,075
km 275	Inorganic dust 70-20%	0,071	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,069	0,2	0,0467	0,0448	0,0459	0,0476
	Sulfur dioxide	n/o	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide	1,7	5,0	1,5	1,5	1,5	1,5
	Formaldehyde CH ₂ O	0,0013	0,051	0,0015	0,0015	0,0015	0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,13	1	0,5	0,5	0,5	0,5
	Benzene, C ₆ H ₆	0,074	0,3	0,05	0,05	0,05	0,05
	Xylene C ₈ H ₁₀	0,090	0,2	0,1	0,1	0,1	0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,2	0,6	0,3	0,3	0,3	0,3
	Hydrogen sulfide, H ₂ S	n/d	0,008	0,004	0,004	0,004	0,004
km 285	Inorganic dust 70-20%	0,069	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,067	0,2	0,0479	0,0463	0,0475	0,0474
	Sulfur dioxide	n/o	0,5	0,025	0,025	0,025	0,025
	Carbon monoxide	1,6	5,0	1,5	1,5	1,5	1,5
	Formaldehyde CH ₂ O	0,0012	0,051	<0,0015	<0,0015	<0,0015	<0,0015
	Hydrocarbons C ₁₂ -C ₁₉	0,12	1	<0,5	<0,5	<0,5	<0,5
	Benzene, C ₆ H ₆	0,072	0,3	<0,05	<0,05	<0,05	<0,05
	Xylene C ₈ H ₁₀	0,088	0,2	<0,1	<0,1	<0,1	<0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,3	0,6	<0,3	<0,3	<0,3	<0,3
	Hydrogen sulfide, H ₂ S	n/d	0,008	<0,004	<0,004	<0,004	<0,004

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km 300	Inorganic dust 70-20%	0,067	0,3				
	Nitrogen dioxide NO ₂	0,068	0,2	<0,0471	<0,0454	<0,0469	<0,0479
	Sulfur dioxide	n/o	0,5	<0,025	<0,025	<0,025	<0,025
	Carbon monoxide	1,6	5,0	<1,5	<1,5	<1,5	<1,5
	Formaldehyde CH ₂ O	0,0013	0,051	<0,0015	<0,0015	<0,0015	<0,0015
	Hydrocarbons C12-C19	0,12	1	<0,5	<0,5	<0,5	<0,5
	Benzene, C ₆ H ₆	0,073	0,3	<0,05	<0,05	<0,05	<0,05
	Xylene C ₈ H ₁₀	0,089	0,2	<0,1	<0,1	<0,1	<0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,2	0,6	<0,3	<0,3	<0,3	<0,3
	Hydrogen sulfide, H ₂ S	n/d	0,008	<0,004	<0,004	<0,004	<0,004
km 310	Inorganic dust 70-20%	0,068	0,3	0,05	0,05	0,05	0,05
	Nitrogen dioxide NO ₂	0,069	0,2	<0,0479	<0,0449	<0,0479	<0,0468
	Sulfur dioxide	n/d	0,5	<0,025	<0,025	<0,025	<0,025
	Carbon monoxide	1,6	5,0	<1,5	<1,5	<1,5	<1,5
	Formaldehyde CH ₂ O	0,0012	0,051	<0,0015	<0,0015	<0,0015	<0,0015
	Hydrocarbons C12-C19	0,13	1	<0,5	<0,5	<0,5	<0,5
	Benzene, C ₆ H ₆	0,074	0,3	<0,05	<0,05	<0,05	<0,05
	Xylene C ₈ H ₁₀	0,088	0,2	<0,1	<0,1	<0,1	<0,1
	Methylbenzene C ₅ H ₆ -CH ₃	0,2	0,6	<0,3	<0,3	<0,3	<0,3
	Hydrogen sulfide, H ₂ S	n/d	0,008	<0,004	<0,004	<0,004	<0,004
km 320	Inorganic dust 70-20%	PB	0,3	<0,05	<0,05	<0,05	<0,05
	Nitrogen dioxide NO ₂	0,071	0,2	0,0477	0,0442	0,0466	0,0474
	Sulfur dioxide	n/o	0,5	<0,025	<0,025	<0,025	<0,025

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km 330	Carbon monoxide	1,7	5,0	<1,5	<1,5	<1,5	<1,5
	Formaldehyde CH ₂ O	0,0013	0,051	<0,0015	<0,0015	<0,0015	<0,0015
	Hydrocarbons C12-C19	0,13	1	<0,5	<0,5	<0,5	<0,5
	Benzene, C ₆ H ₆	0,075	0,3	<0,05	<0,05	<0,05	<0,05
	Ксилол C ₈ H ₁₀	0,089	0,2	<0,1	<0,1	<0,1	<0,1
	Метилбензол C ₅ H ₆ -CH ₃	0,3	0,6	<0,3	<0,3	<0,3	<0,3
	Hydrogen sulfide, H ₂ S	n/d	0,008	<0,004	<0,004	<0,004	<0,004
	Inorganic dust 70-20%	Measurements were not carried out due to the lack of construction work on this site	0,3	<0,05	<0,05	<0,05	<0,05
	Nitrogen dioxide NO ₂		0,2	0,0466	0,0456	0,0478	0,0472
	Sulfur dioxide		0,5	<0,025	<0,025	<0,025	<0,025
	Carbon monoxide		5,0	<1,5	<1,5	<1,5	<1,5
	Formaldehyde CH ₂ O		0,051	<0,0015	<0,0015	<0,0015	<0,0015
	Hydrocarbons C12-C19		1	<0,5	<0,5	<0,5	<0,5
	Benzene, C ₆ H ₆		0,3	<0,05	<0,05	<0,05	<0,05
	Ксилол C ₈ H ₁₀		0,2	<0,1	<0,1	<0,1	<0,1
	Метилбензол C ₅ H ₆ -CH ₃		0,6	<0,3	<0,3	<0,3	<0,3
	Hydrogen sulfide, H ₂ S		0,008	<0,004	<0,004	<0,004	<0,004

Annex 7

Summary data from environmental monitoring checklists

Lot 3

Environmental monitoring checklist

Checklist for Lot 3 site inspection						
Date of site visit: 15.09.2020 18.12.2020		Engineer's representative: Imbarova Sara Contractor's representative:		Engineer's ref.No. Contractor's ref.No.		
Weather Conditions:						
Work currently in progress:						
The problems related to environment		Possible reasons		Proposed measures to reduce the risk		
Local contamination at the fuel station site						
The environmental specialist's absence on the site		Remote work due to the quarantine measures				
No.	Measures for the environment protection	done		In progress		Comments
		Yes	No	Yes	No	
Contractor's base camp						
1		<input type="checkbox"/>				Septic tanks are cleaned daily
2	All wastewater is sent to septic tanks or service water tanks	<input type="checkbox"/>				Control by the environmental specialist on the ACP site
3	All the dangerous liquids stored in a prescribed place on an impermeable base with effluent collection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4	Solid hazardous materials are stored in a safe place in the work areas	<input type="checkbox"/>				Concrete specialized sites are organized, barriers were installed for the storage of hazardous materials in accordance with the requirements.
5	Drains accumulate in the drainage system and are disposed of by the Contractor	<input type="checkbox"/>				According to the EMP
6	All vehicles entering and leaving the base camp are subject to control	<input type="checkbox"/>				Mechanic and OHS inspector

7	Local communities and organizations are informed of the construction schedule and any noise-raising activities on a regular basis through workers and other activities	<input type="checkbox"/>				Communication by telephone during the reporting period, Monthly meetings in Akimat canceled due to the quarantine
8	Open containers for storage of materials are covered with canopies	<input type="checkbox"/>				Containers are installed with covers
9	Open burning is prohibited	<input type="checkbox"/>				constant monitoring is provided by security specialists
10	Fire Fighting equipment <ul style="list-style-type: none"> ▪ Sand bucket and shovel ▪ Foam extinguisher ▪ Protective covering 	<input type="checkbox"/>	<input type="checkbox"/>			Replacing fire extinguishers according to marks on fire extinguishers. Monitoring by security specialists.
11	Access of other people to the town is prohibited by the installation of fencing and security organizing	<input type="checkbox"/>				At the gate is the checkpoint, the contract with the security company. An instruction has been developed for the procedure for admission to the site in connection with quarantine in the region
12	All employees are provided with personal protective equipment (PPE)	<input type="checkbox"/>				it is required to form an irreducible supply of PPE: medical masks, gloves, antiseptics. And also medicines
13	Smoking is prohibited except in Smoking rooms	<input type="checkbox"/>				Repairing territory has a designated smoking area.
14	Relevant road signs and warning signs on the site and in hazardous areas	<input type="checkbox"/>				According to traffic safety plans
15	Drinking water is provided to all employees from commercial and licensed sources.	<input type="checkbox"/>				OHS specialist controls the norms in accordance with the season
16	Protective clothes of all employees are washed on a daily basis	<input type="checkbox"/>				Protective clothes of employees are washed as necessary according to the requirements and standards
17	All employees are provided with three meals a day	<input type="checkbox"/>				All residents in the construction camp. Local workers are provided with a hot

						lunch and drinking water.
18	Canteen with sanitary conditions in base camp	<input type="checkbox"/>	<input type="checkbox"/>			Sanitary days are held. For Lot 1, instructions were issued to eliminate violations in the commodity neighborhood, on the processing of devices
19	First-aid posts and first-aid kit in base camp and in the working areas	<input type="checkbox"/>				First aid kits are replenished as needed. The records of requests for medical care is kept
20	Health of all employees is under control of the doctor in base camp, and the corresponding services are provided, monthly medical examinations are also carried out	<input type="checkbox"/>				In the medical point installed video surveillance for the daily control of the workers and maintained the daily log of the medical examination (Alcotest, pressure, etc.).
21	The whole area is cleared, there is no excess waste, except for designated areas for waste disposal	<input type="checkbox"/>				Base camp territory is cleaned daily from the excess of solid waste, and stored in the designated area. Instructions have been issued for alignment according to the waste work plans (as part of the project EMP)
22	Providing a place for rest in base camp	<input type="checkbox"/>				There are rest rooms
23	Child labour (below 15 years)	<input type="checkbox"/>				Not applicable on site
Production site						
1	The bitumen and chemical materials warehouse is located away from the watercourse and the dam walls are impenetrable and can contain 110% of the tank volume	<input type="checkbox"/>				
2	Liquid waste from the asphalt plant are kept in the established tank and they emptied specialised suction equipment ≤MTTSTH≥ Lyman	<input type="checkbox"/>				Export by a specialized company for disposal has been organized. Reuse of liquid waste for dust suppression.

3	Bitumen is stored in a specialised place and bent in concrete to a volume of 110%	<input type="checkbox"/>				Bitumen pit is concreted Used periodically
4	Solid waste from the asphalt plant is stored at the designated places and disposed of in accordance with approved procedures	<input type="checkbox"/>				With the periodic export for disposal on landfill
5	The area of the plant is engraved for the purpose of reducing dust	<input type="checkbox"/>				
6	The area of the plant is watered for the purpose of reducing dust	<input type="checkbox"/>				According to the schedule of dust control
7	The plant cannot discharge wastewater into any watercourse; impervious concrete pools will be built to receive such water	<input type="checkbox"/>				Concreting of a pit for pumping out and re-using waste for dust suppression completed
8	All workers of asphalt, concrete plant and crusher are provided with protective masks	<input type="checkbox"/>				All provided with masks and overalls.
9	All workers of asphalt, concrete plant and crusher use protective masks	<input type="checkbox"/>		<input type="checkbox"/>		Employees were instructed to improve production culture and work safety
10	Sands and fractions for concrete and asphalt are stored in a wet and covered place	<input type="checkbox"/>				
11	In asphalt, concrete plants and crushers there are fire-Figurehting equipment	<input type="checkbox"/>				Fully understaffed
12	Plant or equipment causing high levels of vibration are built properly, maintained and managed accordingly	<input type="checkbox"/>				In accordance with technical regulations
13	River/canal fenced for the protection of water resources		<input type="checkbox"/>			No need
GAS STATION						
1	Refueling will be strictly controlled and allowed only at the gas station and workshop	<input type="checkbox"/>				
2	Space for storage tanks of fuel protected, and they are impermeable, tank cover closed	<input type="checkbox"/>				
3	Gas station equipped with fire-fighting equipment to be checked weekly	<input type="checkbox"/>				The inspection schedule is being observed. Continuous monitoring by TB is required

						The fire shield is not completed, there is no control from the side of OHS specialist
4	The gas station has warning signs	<input type="checkbox"/>				Absent
5	The gas station is equipped with a special basket for excess waste	<input type="checkbox"/>				Absent
Contractor's workshop and car wash						
1	Liquid hazardous materials are stored in the designated place in workshop	<input type="checkbox"/>				The site is concreted
2	Solid hazardous materials are stored in the designated place in the workshop	<input type="checkbox"/>				
3	There are special containers for the collection of used petroleum products and hydraulic fluids	<input type="checkbox"/>				Provided in places of possible spill
4	The used petroleum products are collected in a concreted canister with a volume of up to 110% and the canisters are cleaned in accordance with the approved procedures	<input type="checkbox"/>				
5	The workshop is equipped with a drainage system	<input type="checkbox"/>				
6	Each transport is inspected and maintained on an ongoing basis	<input type="checkbox"/>				Chief mechanic under the supervision of a OHS specialist
7	All construction equipment complies with European Standards and is equipped with modern noise suppression equipment		<input type="checkbox"/>	<input type="checkbox"/>		
8	The noise suppression equipment of all equipment is checked and maintained in accordance with the approved procedures		<input type="checkbox"/>	<input type="checkbox"/>		There is no such equipment available. Schedule of work in the objects with high noise and vibration levels introduced
9	All workshop workers are provided with welding equipment and personal protective equipment	<input type="checkbox"/>				
10	All technical water is collected in the concreted tank and the tank is cleaned in accordance with the approved procedures	<input type="checkbox"/>		<input type="checkbox"/>		Performed in April 2020
The Project Road						

1	All the roads targeted for construction work watered with the water truck	<input type="checkbox"/>				The intensity of irrigation and the number of water carriers have been increased, and constant monitoring of transit areas near settlements has been ensured
2	On the project road in appropriate places there are flags for the passage of cattle, sheep and other animals	<input type="checkbox"/>				warning signs in areas for cattle creep are installed
3	Sections of culverts and bridges, equipped with safety tapes and twisting signs	<input type="checkbox"/>				
4	Fencing and access control services are installed at all workplaces where it is necessary	<input type="checkbox"/>				
5	Storage of waste of any type, as well as Parking of transports is not allowed at a distance of 100 m from any flow (including drainage or irrigation facilities)	<input type="checkbox"/>				
6	Work areas and hazardous areas are equipped with all relevant road signs and warning signs	<input type="checkbox"/>				
7	Construction machinery and plants are properly maintained to reduce gas emissions	<input type="checkbox"/>				According to the schedule of PEM are monitoring emissions
8	Noise control measures in special facilities	<input type="checkbox"/>				PPE provided: ear plugs
Borrow pits						
1	Quarries are provided with temporary drainage	<input type="checkbox"/>				Excavation from quarries are not performed
2	200 m from the nearest settlements, all construction work stopped from 22: 00 to 6: 00 a.m.	<input type="checkbox"/>				Excavation from quarries are not performed
3	Crushed stone of all size are extracted only from approved quarries	<input type="checkbox"/>				Excavation from quarries are not performed
4	Extraction of crushed stone fraction is carried out in 100 m from the river or watercourse					No fact
5	Stack does not exceed 3 m in height	<input type="checkbox"/>				Excavation from quarries are not performed

6	All open-body vehicles are used for the transportation of materials with possible dust formation, designed for these purposes with well-chosen folding bodies	<input type="checkbox"/>				The control of the senior mechanic
7	During the construction works the volume of noise is limited according to national standards	<input type="checkbox"/>				
8	Materials with possible dust formation do not load exceeding the level of folding bodies and close with a clean tarpaulin	<input type="checkbox"/>				
9	All vehicles, production equipment and devices comply with Euro exhaust emission standards		<input type="checkbox"/>			Equipment rented from villagers does not meet the standards
10	All temporary acquired lands are restored		<input type="checkbox"/>	<input type="checkbox"/>		Upon completion of construction works. Reclamation of 80% of the planned work volume was carried out at quarry No. 1
11	All material residues and contaminated land are collected and disposed of in accordance with approved procedures	<input type="checkbox"/>				Executed in response to Engineer comments
12	During the delivering and using materials, it is watering	<input type="checkbox"/>				Control by the environmental specialist
13	Any direct sites damaged as a result of a dump of soil, are restored to an original look	<input type="checkbox"/>				
14	The riverbanks are protected from the contractor's materials storages or temporary stacks	<input type="checkbox"/>				
15	The negative effects or disruption due to construction work is monitored, with an acceptable level in accordance with the standards	<input type="checkbox"/>				Control by the ecologist and project Manager
16	Access road to quarries, quarries, borrow pits and traffic conditions are serviced according to the approved standards	<input type="checkbox"/>				Excavation from quarries are not performed
17	Draining and draining water, avoiding flooding or causing damage to other works or services causing erosion	<input type="checkbox"/>				

Flora and Fauna						
1	Trees and shrubs that are outside the construction site, but within the road reserve, are usually protected from damage	<input type="checkbox"/>				
2	None of the ancient trees were cut down during the construction works					On the territory of the construction site there are no ancient plantations
3	Cutting is not carried out without the prior permission of the relevant local authorities	<input type="checkbox"/>				During the reporting period, there is no need to cut down plantations
4	Trees and bushes are cut down and removed only if they interfere with the necessary temporary or permanent work					Trees and bushes do not interfere with construction, so cutting down is not required
5	Construction work is not carried out on the construction sites of the bridge during the harvest (specify Yes or No construction work in the transition, specify the date)		<input type="checkbox"/>			The construction of bridges does not affect the cultivation and harvesting, as they are located in remote places.
6	Construction on river sections occurs only during low flow to minimize pollution	<input type="checkbox"/>				

Annex 8

Photos from the site



Instrumental measurements on the site Zhaksymai Lot
1.15.08.2020



Measurements of the air pollution level near Kopa villagey
15.08.2020



Water sampling at the river Shieli 17.09.2020



Water sampling at the river Kenzhaly 26.10.2020



Instrumental measurement of air pollution at km 160,
18.07.2020



Instrumental measurement on the Zhaksymay base
14.08.2020



Safety and traffic safety briefing for Lot 1



Treatment of common areas with disinfectant solution

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Appendix 9

Grievance Register - Construction Supervision Consultant's and Lot 1 Contractor's Records										
Grievance No.	Date of appeal	Name	Address	Contact phone number	Sex	Description of the complaint	Name of the person who received the complaint	Complaint type (A, B, C)	If resolved, resolution result	Status
1	28.12.2017	Bialiev A. Head of the Department of Architecture and Urban Planning	Aktobe region, Shubarkuduk village, Zheltoksan street 5	2 32 49 temirarhstroi@mail.ru	m	request for assistance in obtaining design documentation for km 160-220	Aytuganova Nurgul	A	yes, information is provided on electronic media	Closed
2	10.01.2018	Sulimgerey K. Head of the Department of Land Relations of the Temir District	Shubarkuduk village, Zheltoksan street 5	2 21 22	m	request for information on the boundaries of the designed road at km 140 - 204. locations of cattle passes, junctions/intersections	Aytuganova Nurgul	A	Ref. No. 001-ATB/OTH- 2018	Closed
3	27.07.2018	Abdikadyrov Bakhytzhan	Shubarkuduk village	87019129334	m	Abdikadyrov Bakhytzhan claims that he and at least one other person are forced to resign for being outraged by the conditions for providing drinking water, the process of handing over empty containers from the water, and the monotonous quality of food. To the general indignation of the workers, the SMS worker began to threaten with dismissal. At the time of filing the appeal, one employee was dismissed	Imbarova S.	B	Ref.No. ATB1-713 dated July 26, 2018, the Engineer sent a letter to the Contractor to take actions to stabilize the situation. The contractor, by letter No. 579/2 dated 30.07.2018, denies the existence of tension. The Engineer held a Working Meeting on August 7, 2018 with all parties of the situation. The minutes and a letter on the adoption of measures were sent to the Contractor by letter No. ATB 1-759 dated 08.08.2018. The applicant was given the opportunity to familiarize himself with the Minutes in the Engineer's office	Closed
4	28.07.2018	Iztleuov Tolegen	Shubarkuduk village		m	was forced to resign under duress for being outraged by the quality of food and interruptions in the delivery of drinking water	Imbarova S.	B	Similar to complaint 3	Closed
5	12.09.2018	group of workers	base camp			complain about being involved to work on weekends without compensatory measures (additional payment or provision of days off)	Imbarova S.	B	a request was sent to the contractor about the procedures for engaging in work on weekends and holidays. The answer was not submitted. The procedures for engaging on weekends and holidays are regulated in the Contractor's accounting and personnel records.	Closed

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Grievance Register - Construction Supervision Consultant's and Lot 3 Contractor's Records									
No.	Name	Contacts	sex	description of the essence of the complaint/appeal	Name of the person who received the complaint	Complaint type	taken actions	status (resolved, not resolved)	describe the reasons for not solving
1	Kadyrov Adil, Senior Inspector for ODTI	8 702 492 21 90 8 7777 67 4886	male	driving through the site at 23.00 he pays attention to the dust. The place was not specified.	Temirbek Z.T., the CSC Engineer for health and road safety	B	on June 12 joint site visit. From the general contractor - environmental specialist, from the Subcontractor -	resolved	