

Environmental Monitoring Report

Project Number: 48424-002
July 2019

KAZ: 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 Industry and Infrastructure Development, Republic of Kazakhstan and the Asian Development Bank.

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Semi-annual environmental monitoring report

Project number: No.3416-KAZ
Reporting period: January–June 2019

REPUBLIC OF KAZAKHSTAN: CAREC Corridors 1 & 6 Connector Road
(Aktobe–Makat) Reconstruction Project (section km 330–504)

Funded by the ASIAN DEVELOPMENT BANK

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ABBREVIATIONS

AC	–	asphalt concrete
ADB	–	Asian Development Bank
CAREC	–	Central Asian Regional Economic Cooperation
CFR	–	Committee for Roads
CG	–	Coarse-grained material
CSGM	–	crushed stone-sand-gravel mix
CSC	–	Construction Supervision Consultant
ECP	–	Environmental Control Program
EM	–	Environmental Monitoring
EMP	–	Environmental Management Plan
EP	–	Environmental protection
FLM	–	Fuel and lubricant materials
HIV/AIDS	–	Human Immuno-Deficiency Virus/Acquired Immune Deficiency Syndrome
HS	–	Health and Safety
HSP	–	Health and Safety Plan
IE	–	Individual Entrepreneur
KAZ	–	JSC “National Company “KazAutoZhol“
LLP	–	Limited Liability Partnership
MID	–	Ministry of Investments and Development
MIID	–	Ministry of Industry and Infrastructure Development
MPC	–	Maximum Permissible Concentration
MPL	–	Maximum Permissible Level
PMC	–	Project Management Consultant
RF	–	Russian Federation
RK	–	Republic of Kazakhstan
SAEMR	–	Semi-annual Environmental Monitoring Report
SGM	–	sand-gravel mix
SI	–	State Institution
SMA	–	crushed stone and mastic asphalt concrete

SPZ	–	Sanitary Protection Zone
SS	–	State Standard
SSEMP	–	Site Specific Environmental Management Plan
STI/STD	–	Sexually Transmitted Infections / Sexually Transmitted Diseases
SUE	–	State Utility Enterprise
SW	–	solid waste
TS	–	Traffic Safety

1 INTRODUCTION

1.1 Preamble

1. The report is a semi-annual environmental monitoring report of the of the CAREC Corridors 1 & 6 Connector Road (Aktobe - Makat) Reconstruction Project (road section km 330–504, Lots 4–7). The report is the third semi-annual for this project.

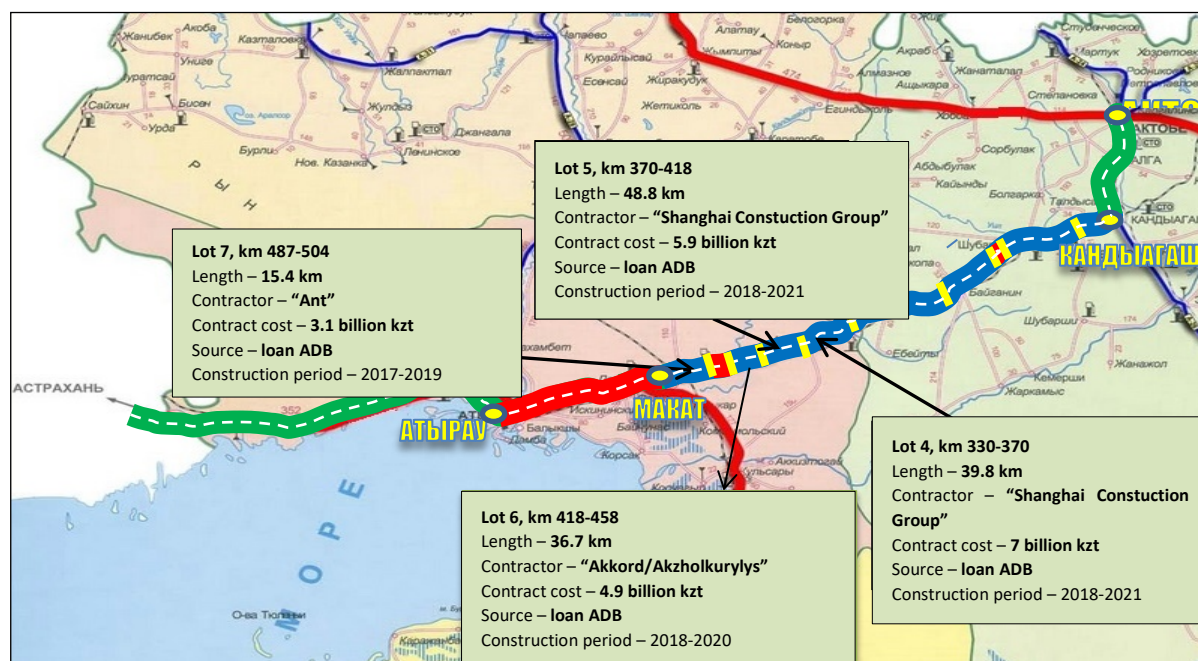
1.2 Key information

2. In July 2018 three Contracts were signed by the repeated tender with the company "Shanghai Construction Group Co." (hereinafter– SCG) and Akkord Joint Venture with Ak Zhol Kurylys LLP (hereinafter– AA). The contracts on Lot 4 and Lot 5 were awarded to SCG, and contract on Lot 6 was awarded to AA. These new Contractors began mobilization and preparatory work on the site since August 2018.
3. "Shanghai Construction Group Co.", the Contractor for the Lot 4 (Contract 004-ADB/CW-2018) and for the Lot 5 (Contract 005-ADB/CW-2018) received advance payments in July 2018. Contractor received certificate of the State registration of the Kazakhstan branch "Shanghai Construction Group Co." on 30.10.2018. Also, the Contractor obtained License for the construction of highways of the corresponding category on 24.12.2018. The Engineer officially issued "The notice of the beginning of works" on 19.12.2018.
4. Contractor "Akkord / Akzholkurylys" Lot 6 (km 418-458) (Contract 006-ADB/CW-2018) were received advance payment on 27.07.2018. Contractor received permission (coupon) for the construction and installation work from the office of state architectural-building control. "Work order" was received from the Employer and approved by the Traffic police. Engineer officially issued a "Notice of the beginning of work" on 01.10.2018. The site preparation for construction of Base camp with an area of 3 hectares on 435 km of the project road, near Zhamansor village has been completed on 25.03.2019. The territory is fenced, during the reporting period, works on installation and construction of premises, office buildings, office and residential premises for personnel and working contingent of the Contractor are continuing.
5. On lot 5 in the reporting period, the issue of changing the additional base from a layer of soil reinforced with inorganic binder (soil – 80%, SGM – 16%, stabilizer - 0.002%) H-20 cm to an alternative option of the subbase layer of SGM (sand-gravel mixture), H-20 cm is considered.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

6. Road "Aktobe-Atyrau-Border of the Russian Federation to Astrakhan" is a road of national importance. The projected section is a section of the road connecting the Northern and Western regions of Kazakhstan with each other, with access to the Russian Federation, which causes increased requirements for transport and operational characteristics of the road.



Picture 1. Location of the project road

7. The category of the projected road is II, according to the traffic intensity. Construction of the road is carried out under 4 Contracts, as indicated below.
8. **Lot 4:** km 330–km 370 (Sagiz village): This section includes the reconstruction of the road from category III to category II with a total length of 40 km. Other parts of this section, the direction of traffic flow coincide with the existing coverage with partial slopes from the embankment in the area of rectification and curve. On this site, the project provides for the construction of 2 bridges and 1 overpass. Overpass on km 336+900, the length is 42.2 meters. The bridge across the river Nogayty on km 338+900 has the length of 66,15 meters. The bridge across the Sagiz river at km 342+300 has the length of 105,3 meters. This site provides for the construction of culverts in the number of 14 pieces of different diameters, cattle passes (6 pieces), and rest area (2 pieces).
9. **Lot 5:** km 370–km 418 (v.Mukur - v. Zhanterek): This section includes the reconstruction of the road from category III to category II with a total length of 48.2 km. Other parts of this section, the direction of traffic flow coincide with the existing cover with partial slopes from the embankment in the area of rectification and curve. On this site, the project provides for the construction of 1 bridge. The bridge across the river Mukur at km 379+100 has the length of 48.55 meters. Also on this site construction of culverts in the number of 12 pieces of different diameters, cattle passes (8 pieces), rest area (2 pieces) are provided.
10. **Lot 6:** km 418–km 458 (v. Zhamansor): This section includes the reconstruction of the road from category III to category II with a total length of 36.73 km. Other parts of this section, the direction of traffic flow coincide with the existing coverage with partial slopes from the embankment in the area of rectification and curve. On this site, the project provides for the construction of 1 bridge. The bridge across the Sagiz river at km 429+000 has the length of

84,25 meters. The project also provides for the construction of culverts in the number of 12 units of different diameters, 1 cattle passes, and 2 rest areas.

11. **Lot 7: km 487–km 504 (v. Dossor):** length of this road section is 15,392 km, type II, 2 lanes. This section includes the reconstruction of the road from category III to category II. Other parts of the site, the direction of traffic flow coincide with the existing coverage with partial slopes from the embankment in the area of rectification and curve. This section provides for the construction of culverts in the number of 12 pieces of different diameters, cattle passes (2 pieces).

2.2 Contracts for project implementation and management

12. CFR MID RK concluded a service contract with JSC "NC "KazAutoZhol" (KAZ) to provide consulting services for project management in accordance with the terms of reference acceptable to ADB and applicable under the legislation of the Republic of Kazakhstan. KAZ remains fully staffed throughout the Project. The responsible officer for environmental protection and protective measures conducts audits, site inspections, interacts with a specialist on protective measures of the CSC in order to effectively manage the project in terms of the implementation of plans for environmental protection.
13. By the decree of the President of the Republic of Kazakhstan dated 26.12.2018. №806 "On measures to further improve the system of public administration of the Republic of Kazakhstan" in order to improve the efficiency of public administration Ministry of Investment and Development of the Republic of Kazakhstan reorganized by the transformation of the Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan with the transfer of functions and powers: The Ministry of national economy of the Republic of Kazakhstan in the sphere of formation of the state policy on attraction of investments and the Ministry of Foreign Affairs of the Republic of Kazakhstan in the sphere of implementation of the state policy on attraction of investments.
14. The regional representative from the Employer is "NC "KazAutoZhol" JSC Atyrau branch. A list of the major organizations included in the project related to the environmental protection measures (Environmental Safeguards) is shown below in Table 1. Information on contracts with Contractor is presented in Table 2. Organizational chart of the Project coordination is described at Picture 2.

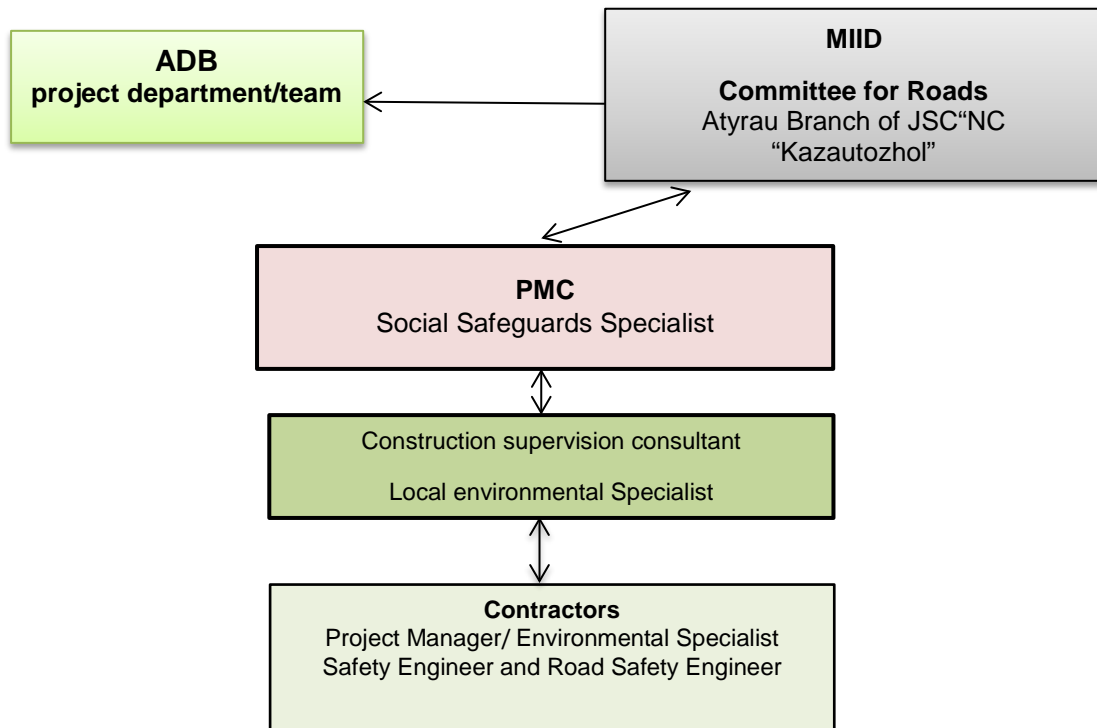
Table 1. The list of the organizations and contacts of the experts involved to Environmental safeguards implementation of the Project

Organization name	Representative	Contact data
ADB	Nurlan Djenchuraev	6 ADB Avenue, Mandaluyong, Metro Manila
ADB office in Kazakhstan	Malika Babadjanova Laura Malikova	12 Samal Microdistrict, Astana Tower Business Center, Nur-Sultan
Committee for Roads	Ruslan Kussainov	Astana 010000/ Transport Tower, Kabangbai Batyr st. 32/1 8 778 668 70 06 r.kusainov@mid.gov.kz
PMC JSC "NC"Kazavtozhol"	Zeinullina Aliya Amantaevna Social and environmental safeguards specialist	+ 7 701 982 66 57 a.zeinullina@kazautozhol.kz

Atyrau branch of JSC “NC”Kazavtozhol”	Kerimkulov Serik branch Director	Atyrau.info@kazfutozhol.kz
Consultant Supervision of Construction DONGSUNG ENGINEERING CO., LTD/ “ZS ENGINEERING ” LLP	Novosadova Natalya Specialist on environmental protection	Atyrau, Isatay square 5 +7 (7122)29 01 49 +7 (7122) 29 06 75 aktobe_kns1@mail.ru
«Shanghai Construction Group Co.» Lot 4, 5	Project Manager Fan Zhining	+7 776 061 60 01
Joint Venture “Accord” and “AK Zhol Kurylys” LLP Lot 6	Gulzhanat Zhantokova	+7 777 298 88 44
JSC ANT Insaat Maden Sanayi Anonim Shirketi Lot 7	Gulzhanat Zhantokova	+7 777 298 88 44

Table 2: Contractor Data Information

Contractor	№ of Contract	Road section length (km)	Date of signing of the contract	The date of commencement and completion of the project
Lot 4 «Shanghai Construction Group Co.» (China)	004-ADB/CW-2018	39.80	20.07.2018	19.12.2018 07.03.2021
Lot 5 «Shanghai Construction Group Co.» (Cnina)	005-ADB/CW-2018	48.21	20.07.2018	19.12.2018 05.06.2021
Lot 6 JV «Akkord / Ak zhol kurylys» (Azerbaijan/ Kazakhstan)	006-ADB/CW-2018	36.74	10.07.2018	01.10.2018 29.11.2020
Lot 7 «Ant Insaat Maden Sanayi A.S.» (Turkey)	007-ADB/CW-2017	15,392	16.08.2017	16.08.2017 20.06.2019
Total project length:		140,14		



Picture 2. Organizational chart of the Project coordination

2.3 Project Activities during the Current Reporting Period

15. **Lot 4.** The Contractor «Shanghai Construction Group Co.» had a serious delay of work, especially in the preparatory and mobilization works on the site, which was a most important aspect of the implementation and activation of the main construction works planned in the Contractor's program, for the following important reasons:
 - The Contractor could not make a good plan and respectively the calendar schedule of works;
 - The Contractor could not provide resources for construction, such as engineers, specialists, construction equipment, operators of the equipment, skilled workers and the main construction materials;
 - The Contractor did not manage to attract specialized subcontractors.
16. For Lot 4, the Engineer issued a "Notice of commencement of work" on 18.01.2009. During the reporting period the following works were carried out:
 - Removal of topsoil on bypass road between km 330–336, km 337–370 - just 39 km done
 - Bypass road construction between km 330–336, 340-370 km, 36 km done.
 - Milling and scarifying of the existing coating layers and base existing pavement between km 330–336, km 338–370 - only 39 km done.
 - Removal of topsoil layer between km 330–336, 342–352 km, km 367–370 - only 18.5 km done.

- Subgrade structure between km 0–1. The volume of 20 thousand m3.
- Work on culverts has not begun.

17. The progress of construction works implementation on Lot 4 is presented in Table 3 below.

Table 3. The status of performance of construction works on Lot 4 for the reporting period

Name of Contractor and section road lenght	Type of work	unit	Total Contract	Completed in 2018	Completed for I semi-annual 2019	% performance	Remain
Shanghai Construction Group Co.Ltd Lot-4, 39.8 km km 330–km 370 (Sagiz village)	Cost	tenge	9 819 136 480,70	-	1 580 533 258	16	8 238 603 222
	Binder Coarse	km	40	-	-	-	40
	Upper Base Coarse	km	40	-	-	-	40
	Lower Base Coarse	km	40	-	-	-	40
	Subbase	km	40	-	-	-	40
	Roadbed	thousand m ³	1201188	-	14 500	2	1 186 688
	Drainage pipe	pcs	20	-	-	-	20
Total progress of works		%	100	-	4,06	4,06	95,94

18. **Lot 5:** Since the Contract was managed by the same Contractor as Lot 4, the preparatory work was similar to Lot 4 during the first months. However, unlike Lot 4, the Contractor in January 2019 attracted a Subcontractor with a construction base in the region. Much of the preparatory work, including site mobilization, was transferred to the Subcontractor. Compared to the General Contractor, the Subcontractor was able to mobilize construction resources more quickly, taking advantage of the construction base in the region.
19. The Subcontractor performed works with high productivity, while the main Contractor practically did not deliver materials to the site. Thus, the Contractor Lot 5 with the involvement of construction resources provided by the Subcontractor, was able to achieve significant progress.
20. By June 30, the construction of the Base camp Lot 5 is fully completed. As 30.06.2019 not a necessary and sufficient number of places in the base camp for the accommodation of workers. The Subcontractor makes many efforts to complete to provide with the necessary quantity of beds for the personnel.
21. For Lot 5, the Engineer issued "Notice of commencement of work" on 08.01.2009. During the reporting period, the following types and quantites of works were carried out: on the bypass road, Topsoil was removed from Km 370–402.5 (32.5 Km) and the bypass road Crushed stone and Sand Mix was filled from Km 370–384.9 (14.9 km), 4 Km was accepted. On the main road: the roadbed completed the final layer from Km 370–373 (3 km). the roadbed completed final layer on Km 373–373.7 (700 m). Completed slope milling on km 373–373.9 (900 meters) and demolition of existing pavement from km 380.6–380.9 (300 m) and on Km 384.9–385.5 (600 m).
22. The progress of construction works implementation on Lot 5 is presented in Table 4 below.

Table 4. Status of construction works on Lot 5 for the reporting period

Name of Contractor and section	Type of Work	unit	Total Contract	Completed in 2018	Completed for 1 semi-annual 2019	% act	Remain
Shanghai Construction Group (section km 370-418) Lot 5	Cost	Tenge	9,396.3	-	878,58		9386,94
	Binder Coarse	km	48.0	-	-	0	48.0
	Upper Base Coarse	km	48.0	-	-	0	48.0
	Lower Base Coarse	km	48.0	-	-	0	48.0
	Subbase	km	48.0	-	-	0	48.0
	Roadbed	1000 m3	736.8	-	164,1	22.27	572,72
	Drainage pipe	pcs	20	-	-	0	20
	Total quantity of work	%	100	-	9,35	9,35	90,65

23. The status of works on borrow pits is given below in table No. 5

Table 5. Information on borrow pits on Lot 5 as of 30.06.2019

Name	KM/PK	Location	Reserve			Status
			Depth	1000m ³	m ³	
Project soil reserve № 1	407++30/375+25	To the right of the road axis 305 m	3.0	1,332.8		1 horizon 3.0 m
Project soil reserve № 2	367+400/369+04	To the right of the road axis 300m	3.0	1,332.8		1 horizon 3.0 m
Soil reserve №1	424+930/56+60,0	To the right of the road axis 670m	2.8	145,177	145,177.2	1 horizon 3.0 m
Soil reserve №2	431+366/118+74,0	To the right of the road axis 480m	2.8	140,529	140,529.2	1 horizon 3.0 m
Soil reserve №3	432+093/138+80,0	To the right of the road axis 120m	2.8	139,244	139,244.0	1 horizon 3.0 m
Soil reserve №4	440+766/217+27,0	To the right of the road axis 340m	2.4	194,621	194,620.8	1 horizon 3.0 m
Soil reserve №5	442+437/231+97,0	To the right of the road axis 1180m	2.8	138,602	138,601.7	1 horizon 3.0 m
Soil reserve №6	448+256/294+05,0	To the right of the road axis 330m	1.6	190,560	190,559.8	1 horizon 3.0 m
Soil reserve №7	457+390/362+43,0	To the right of the road axis 620m	1.2	138,915	138,914.7	1 horizon 3.0 m
Soil reserve №8	457+390/362+43,0	To the right of the road axis 1050m	1.6	164,658	164,658.0	1 horizon 3.0 m

24. **Lot 6.** All objects of the base camp, built to date in the village Zhamansor, are fully settled by workers and engineers of the Contractor, also Engineering consultants for supervision, and all objects are fully operational from 01.03.2009. However, the installation of the laboratory was postponed on the site. To date, the certificate of Contractor laboratory has not been issued by the appropriate authority. This affects the progress of work on the site, as it is necessary to carry out all technical tests in a third-party laboratory. The construction of the concrete mixing plant and the preparation of cement has not been commenced.
25. The main problem causing concern now is the Permit for extraction of soil materials from soil borrow pits. And the issuance of this Permit is expected for a long time by the Contractor: from December 2018. It is expected on terms by August to get all permits to production.
26. For Lot 6 Engineer issued a "Notice of commencement of work" on 01.10.2018. During the reporting period, the Contractor conducted the following types and quantities of works: removal of topsoil on the main road - 15,500 m (PK0+00 to PK155+50). Work on the bypass road completed – 36 200 m. The filling of the roadbed on the main road – 12 500m (PK 0+00 to

PK125+00). The final layer of roadbed – 3 500m (PK 0+00 to PK 35+00). On the main road, the following works were carried out: preparation of the base, loosening of the slope, milling of ledges and filling on roadbed of soil from PK 125+00 to PK 150+00. On PK 12+18 installed r/f pipe diameter -1.0 m on the main road. On the PK 28+78 installed r/f pipe with a diameter of 1.5 m on the main road.

27. The progress of construction works implementation on Lot 6 is presented in Table 6 below. Information on borrow pits, used for Lot 6 is presented in Table 7.

Table 6. Status of construction works on Lot 6 for the reporting period

Name of Contract or and section	Type of Work	unit	Total Contract	Completed in 2018	Completed for 1 ST semi-annual 2019	% performance	Remain
Lot 6 Akzhol Kurylys/ Akkord	Cost	Tenge	6,262,622,776.850	510,052,765.13	933,552 450.405	23.05	4,819,017 561.32
	Binder Coarse	km	36.736	-	-	0	36.736
	Upper Base Coarse	km	36.736	-	-	0	36.736
	Lower Base Coarse	km	36.736	-	-	0	36.736
	Subbase	km	36.736	-	-	0	36.736
	Roadbed	1000 m3	854.164	-	220.680	25,83	633.484
	Drainage pipe	pcs	13	-	3	23%	10
	Total quantity of works	%	100	-	25.83%	25,83%	74,17

Table 7. Information on borrow pits on Lot 6 as of 30.06.2019.

Name	KM/PK	Location	Depth			Extraction	Reclamation	Status
			m	1000 m3	m3			
Designed borrow pit № 1	438+950/1 97+20	To the right of the road axis 400m		1,197.52		81000.0	0	1 horizon 3.0 m
Designed borrow pit № 2	422+750/4 0+00	To the right of the road axis 450m		1,333.7				1 horizon 3.0 m
Borrow pit №1	424+930/5 6+60,0	To the right of the road axis 670m	2.8	145.177	145177,2			1 horizon 3.0 m
Borrow pit №2	431+366/1 18+74,0	To the right of the road axis 480m	2.8	140.529	140529,2			1 horizon 3.0 m
Borrow pit №3	432+093/1 38+80,0	To the right of the road axis 120m	2.8	139.244	139244,0			1 horizon 3.0 m

Borrow pit №4	440+766/2 17+27,0	To the right of the road axis 340 m	2.4	194.621	194620,8			1 horizon 3.0 m
Borrow pit №5	442+437/2 31+97,0	To the right of the road axis 1180 m	2.8	138.602	138601,7			1 horizon 3.0 m
Borrow pit №6	448+256/2 94+05,0	To the right of the road axis 330 m	1.6	190.560	190559,8			1 horizon 3.0 m
Borrow pit №7	457+390/3 62+43,0	To the right of the road axis 620 m	1,2	138,915	138914,7			1 horizon 3.0 m
Borrow pit №8	457+390/3 62+43,0	To the right of the road axis 1050 m	1,6	164,658	164658,0			1 horizon 3.0 m

28. **Lot 7.** The Contractor carries out the production work in accordance with the approved Work Schedule and the Financing Plan, which were agreed by the Engineer. In winter, the Contractor carried out work on the winter maintenance of the reconstructed road for continuous and uninterrupted passage of the transit traffic flow.

29. On January 14, 2019, the Contractor temporarily opened lot 7 road section <km 487–km 504> to ensure the passage of vehicles and passengers in response to the request of the Atyrau region Akimat. It was agreed with the Akimat that the road will be opened in the near future and after 24.03.2009 the road will be closed for further works in accordance with the schedule. And the road was closed respectively 25.03.2009. as planned

30. On the Lot 7 site for the reporting period, the following types of work were implemented:

- Top layer of coating SMA-20, h-5cm,
- Binder Coarse layer CG porous AC, h-9cm,
- Upper Base Course of high porous AC, h-10cm,
- Lower Base Course of CSGM (C4),
- Subbase of SGM, h-20cm throughout km 488,km 193 Km to km 504,000

31. The progress of construction works implementation on Lot 7 is presented in Table 8 below.

Table 8. Status of construction works on Lot 7 for the reporting period

Name of Contractor and section	Type of Work	unit	Total Contract	Completed in 2018	Completed for 1 st semi-annual 2019	% performance	Remain
ANT Lot 7 (km 487-504)	Cost	KZT (Million)	3,177.20	2,347.17	538.81	90.83%	291.22
	Wearing Coase	km	15.39	0,00	15.39	100.00%	0.00
	Binder Coarse	km	15.39	14.19	1,20	100.00%	0.00

	Upper Base Coarse	km	15.39	15.39	0,00	100.00%	0.00
	Lower Base Coarse	km	15.39	15.39	0,00	100.00%	0.00
	Subbase	km	15.39	15.39	0,00	100.00%	0.00
	Roadbed	1000 m3	437.89	437.89	0,00	100.00%	0.00
	Drainage pipe	pcs.	14	14	0	100.00%	0.00
	Total quantity of work	%	100.00%	73.88%	90.83%	90.83%	9.17%

32. Information on borrow pits used for Lot 7 is presented in Table 9 below.

Table 9. Information on borrow pits on Lot 7 status for 30.06.2019

Name	KM/PK	Location	Depth			Extraction	Reclamation	Status
			m	thousand m ³	m ³			
Borrow pit №1	Km487/PK0+00	From right 1,0 km	1.78	266.9	-	0	Not operated	1 horizon 3.0 m
Borrow pit №2	Km492/PK40+00	From right 0,36 km	2.78	416.5	-	189,615.61 m ³	100%	1 horizon 3.0 m
Borrow pit №2-1						60,123.87 m ³	100%	1 horizon 3.0 m
Borrow pit №3	Km501+500/PK134+00	From right 1,7 km	2.8	419.3	-	35,584.05 m ³		1 horizon 3.0 m

2.4 Description of Any Changes in the Design of the Project

33. **Contract for Lot 7:** Changing the design of the Upper Base Coarse. Design by the project: Upper Base Coarse of black crushed stone. The proposed alternative design: Hot highly porous AC grade II. Replacing the <upper base coarse layer of black crushed stone thickness H=10 cm> hot highly porous AC brand II with a thickness of H=10cm. The change was agreed by the Designer of the Project "Arnai" LLP

34. **Contract of Lots 4, 5 and 6** the Change in construction: an Extra layer of Foundation. The design of the project: a layer thickness of 20cm of soil, sand and gravel mixture, cement with stabilizing additive Roadzyme and the next top layer thickness of 20cm of crushed-sand mixture C1. Alternative design: a layer 20cm thick of sand-gravel mixture and the next top layer 25cm thick of gravel-sand mixture C10

35. Regarding the work of Contractors of Lot 4, Lot 5 and Lot 6 on the construction of road pavement regarding the "structure of additional layer of soil reinforced with cement with a stabilizing additive" under the Contract, it was noted from the experience of such application on previously implemented projects in other regions of the Republic of Kazakhstan, which led to serious violations of road pavement. A consensus was reached on the change in the design of the pavement among all parties concerned about the implementation of the project.

36. All contractors of Lot 4, Lot 5 and Lot 6 agreed to build on the alternative option, without requiring additional terms and means under the Contract on the basis of the following decision: to exclude "cement, additives or stabilizer Roadzyme" from the additional layer of the base to eliminate future risks of violation of the road surface, replace with SGM (sand and gravel mixture) throughout the thickness of 0.20 m.

37. According to the above-described modifications from the Designer of the Project of "Kustanai DorProject" LLP, there was no objection. These changes will allow the Contractor to:

- (i) reduce construction time;
- (ii) ensure that the initial cost per unit of laying the additional base layer remains the same;
- (iii) to execute trial construction and test of alternative option;
- (iv) to be convinced of ensuring bearing capacity and the module of elasticity according to the project requirement and Technical specification.
- (v) The mitigation measures on environmental impacts indicated in the EMP / SSEMP of Lots 4, 5, 6 and 7 are sufficient for the new conditions as road pavement changes have not a negative impact on the environment.

3 THE ENVIRONMENTAL ACTIVITIES

3.1 General Description of Environmental Activities (environmental protection measures)

38. **Lot 4:** For the development of the EMP, the contractor involved specialists from separate organization. The EMP was agreed by CSC and PMC on 4 March 2019. On 14.02.2019 the Contractor submitted to the MIID RK an application on 8 borrow pits in order to include in the State Subsoil Fund Management Program. Regarding the Contractor's organizational structure on environmental protection, environmental specialist not mobilized. During the reporting period, CV of the environmental specialist was submitted, but due to the discrepancy between education and the required project experience, the candidate was not agreed by the CSC. No reports on the implementation of the EMP activities were provided during the reporting period. Monitoring of the site showed that the EMP is not performed due to the lack of an environmental specialist on the site. There is no contract for industrial environmental monitoring. The situation on this site is of particular concern as construction work is underway, but environmental protection work is not provided. The CSC, in turn, has repeatedly notified in writing of the situation, but no adequate measures have been taken to address the situation. Non-conformance notice letters are presented in Application 8.
39. **Lot 5:** based on the results of the audit of the ADB consultant, the Contractor made adjustments to the EMP in terms of water resources monitoring, inclusion of indicators on suspended particles and measures to prevent spills of FLM. On 8.06.2019 CSC agreed the EMP and submitted to PMC for approval. On this site the environmental specialist isn't mobilized yet, the selection process is going on. Environmental specialist of Lot 6 and Lot 7 combines work of this site. The contract for the environmental monitoring was concluded with an independent certified laboratory LLP "Exonormative".
40. **Lot 7:** during the reporting period, in the second quarter in June measurements have been carried out under the agreement with "Analytical laboratory on environment protection" LLP, agreement No.59/19 dated 01.03.2019. EMP report not submitted. The removal of SW, hazardous waste and wastewater prolonged the contract with IE Kabulov Contract number 07/2019 of 06.03.2019

3.2. Site inspections

35. For the reporting period site inspections were carried out for monitoring of EMP performance and assessment of construction works compliance with environmental safeguards requirements. Information on each inspection is presented in Table 10 below.

Table 10. Information on-site inspection

Date	Audit's full name	Purpose	Summary conclusion of inspection
19.03.2019	CSC: Imbarova Sarah From the contractor participated Dautova J. Head of Safety and Labor department and environmental specialist Lot 7	Consultation for Lot 5 and Lot 6 - preparation of the EMP	Base camps in construction process. The Engineer issued recommendations about development of the plans of measures about management of the base camp, questions of the drainage system and the sewerage, zoning of the territory, questions of gardening of the camp, the organization of the platform of temporary warehousing of rubbish and development of measures of ensuring fire safety

20.03.2019	CSC: Imbarova Sarah	Lot 4. Inspection of environmental safeguards implementation	Lot 4 contractor involved a subcontractor in the development of the EMP. EMP is accepted and coordinated by CSC of 3.03.2019. The environmental specialist is not mobilized to the base camp during the construction
25.03.2019	CSC Imbarova Sarah	Visit sites of Lot 4, Lot 5 and Lot 6 to observe the implementation of environmental and safety measures	Status of the preparation of the EMP on Lot 5 and Lot 6 is weak, environmental specialists are not mobilized to the sites
29.03.2019	CSC: Imbarova Sarah	Monitoring of EMP implementation on Lot 7	Construction sites and base camp has no remarks/records on EMP measures.
17.04.2019	CSC Imbarova Sarah Zhantokova Gulzhanat environmental specialist of "Akzhol Kurylys" LLP	Review environmental safeguards compliance and monitoring of Lot 5,6 sites	Issued adjustments to the EMP of Lot 5 and Lot 6 regarding the formulation of risks and information to fill in the risk matrix Sites in the process of mobilization of personnel and equipment
28.05.2019	CSC Imbarova Sarah	Review environmental safeguards compliance of Lot 4	Base camp is not ready, septic tanks and storage of rubbish are not ready
28.05.2019	Zeinulina Alia – PMC, ADB Mission environmental specialist of CSC	Review environmental safeguards compliance of Lot 4, Lot 5, Lot 6 and Lot 7	Low rate of work on sites Lot 4, 5 and 6. Remarks on non-conformances eliminated in working order
29.05.2019	CSC Imbarova Sarah	Inspect the environmental safeguards compliance of Lot 5 and Lot 6 construction works	Towns are populated, part recommendations about elimination of discrepancies are issued on safety of an inhabited. Recommendations are issued on improvement and gardening
28.06.2019	CSC Novosadova Natalya	Inspect the environmental safeguards compliance of Lot 4, 5 and Lot 6	EMP is carried out only on Lot 6. Lot 5 and 4 works on submitting and coordination of independent laboratory are not carried out.

41. The Contractor Lot 7 in the fall of 2018 have arranged 2 cattle passes: on Km 492 and Km 499 for animals transition and perhaps of agricultural machinery in the future. At this site for the period of monitoring of the current half of the year, migration of any species of animals is not revealed. There were no wild animals on the territory of the site.
42. Environmental specialist of Lot 7 during the reporting period has demonstrated sufficient diligence in ensuring and compliance with measures for environmental and social safety of

the project and the environment. All oral instructions for the elimination of inconsistencies Environmental specialist of Lot 7 eliminated in working order. All discrepancies in this lot were in the category of minor impacts. This confirms the diligence and professionalism of the contractor's Environmental specialist. But the combination of the position of Environmental specialist on Lot 5 and Lot 6 contributed to the failure of the term of the report on EMP. At the time of preparation of this report, the CSC had not received EMP report.

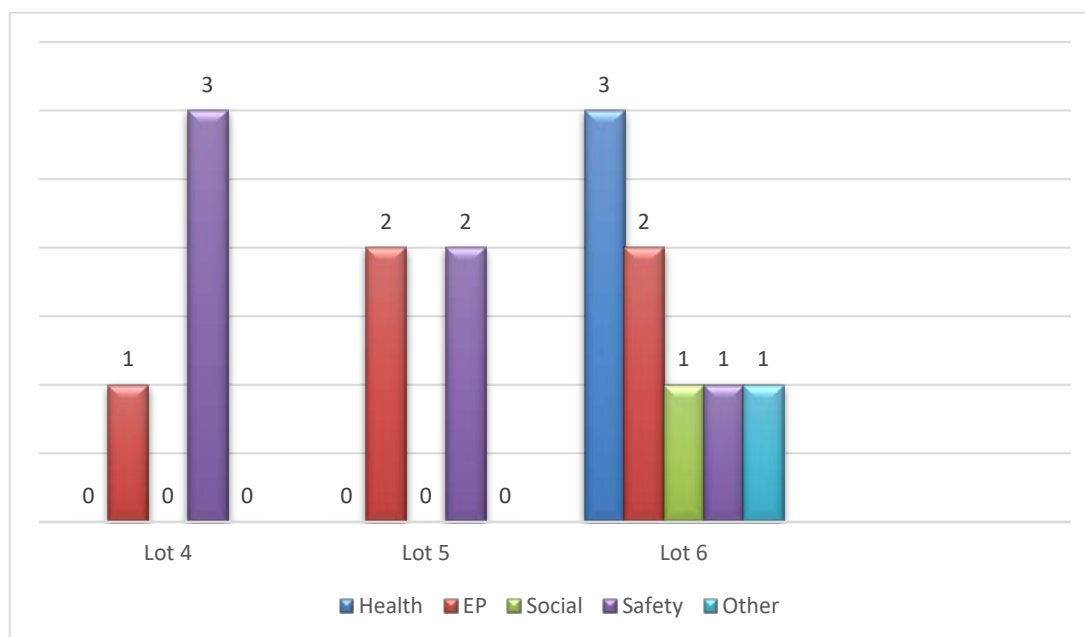
43. During the site visiting it was noted the permanent presence of environmental specialist of Lot 7 on Lot 6 in Zhamansor. It is noted that the Environmental specialist concentrated the main part of the work on the development of EMP and project plans for Lot 5 and 6. The actual current reporting on the EMP implementation for Lot 7 was carried out with a noticeable delay in terms of time.

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

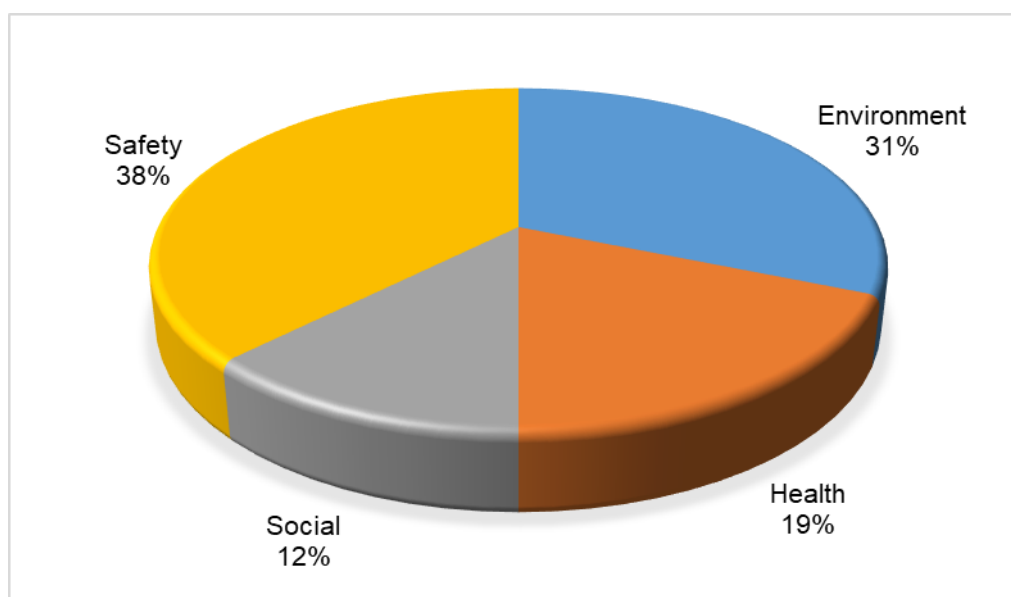
44. During the reporting period 5 significant inconsistencies revealed on Lot 4. There is one inconsistency in environmental protection category: absence of an environmental specialist on site and, accordingly, it is reason for all comments of the CSC such as lack of work in the field of EP, indicated in their EMP, lack of EP and EM reports. There is another one in social unrest category. Two other significant discrepancies are classified as safety. At this site, the question of providing PPE (special clothing and footwear) for all personnel remains open.
45. During the reporting period 4 inconsistencies revealed on Lot 5. Regarding EP there are 2 discrepancies on EMP development and mobilization of the environmental specialist on site. And 2 for safety: the fire prevention measures to the actual scale of the camp and residential area, as well as provision of employees with special clothing and footwear, and PPE were not relevant. All discrepancies are closed.
46. 8 inconsistencies revealed on Lot 6. 3 inconsistencies regarding the health are following: the density of accommodation in residential areas does not meet sanitary and hygienic standards and poor quality of food, the lack of PPE on the construction site. There are two inconsistencies in the EP: the EMP is not provided, the ecologist is not mobilized to the site. Social, others and safety categories have by one inconsistency. By the end of the reporting period, all nonconformances in this area have been eliminated, except for one regarding the health protection: the density of placement of workers in residential premises does not meet sanitary and hygienic standards.
47. On the construction site of Lot 7 in the part of the EP inconsistencies are not revealed, the EMP is performed within the developed measures. There is a delay on submission of environmental specialist's reports on time.
48. Pictures 3.1 and 3.2 below show the overall picture of the identified discrepancies for all participants in the project. Application 1 to this report provides information on the monitoring of non-compliance.
49. Summary on detected issues tracking for the current period is presented in Table 11.

Table 11. Summary table

Total number of issues under the project	17
Number of unsolved issues	2
Number of resolved issues	15
Percent of completeness	88 %
Unsolved issues during the reporting period	2
Resolved issues during the reporting period	15



Picture 3.1 General statistics on identified discrepancies in the reporting period



Picture 3.2. Priority issues of the reporting period

50. Correspondence for the reporting period from the CSC to Contractors
- ❖ Letter № DSE-AM-2-1046 of 04.05.2019 «On environmental aspects of the Contractor's work»
 - ❖ Letter № DSE-AM-2-1047 of 04.05.2019 «On environmental aspects of the Contractor Lot 5»
 - ❖ Letter № DSE-AM-2-1053 of 10.05.2019 «EMP – Not Agreed (Lot 6)»
 - ❖ Letter № DSE-AM-2-1054 of 10.05.2019 «EMP – Not Agreed (Lot 5)»
 - ❖ Letter № DSE-AM-2-1077 of 18.05.2019 «Health and safety, environmental and social protection audit»
 - ❖ Letter № DSE-AM-2-1078 of 18.05.2019 «Health and safety, environmental and social protection audit»

- ❖ Letter № DSE-AM-2-1079 of 18.05.2019 «Health and safety, environmental and social protection audit»
- ❖ Letter № DSE-AM-2-1091 of 21.05.2019 «Clearing the territory, garbage on the site, storage of solid waste»
- ❖ Letter № DSE-AM-2-1092 of 21.05.2019 «Clearing the territory, garbage on the site, storage of solid waste»
- ❖ Letter № DSE-AM-2-1093 of 21.05.2019 «Training of specialists of contractors on safety and protective measures»
- ❖ Letter № DSE-AM-2-1098 of 22.05.2019 «EMP»
- ❖ Letter № DSE-AM-2-1114 of 24.05.2019 «By letter Ref №031 from 23.05.2019 on the status of the EMP».

3.4. Trends

51. During the reporting period, monitoring of sites, audits of construction sites did not identify negative trends on implementation of environmental safeguards requirements for Lot 7. All the activities prescribed in EMP are carried out. There are serious problems with safeguards compliance on Lot 4, Lot 5 and Lot 6. But the most alarming situation is on Lot 4 where there is a tendency to ignore the contractual obligations of the contractor for the EP on the part of the implementation of the agreed EMP, in terms of the organization and conduct of EMP. Actually, works are in process on Lot 4 by ignoring all activities of EMP of this site. The management of this site does not understand the importance and necessity of organizing the work of the ecologist on the site.

3.5. Unforeseen impacts on the environment or risks

52. During the reporting period, the monitoring of construction sites did not reveal unforeseen impacts on the sites Lot 7, Lot 6 and Lot 5. According to Lot 4, the CSC believes that all construction activities lead to unforeseen impacts because there is no environmental specialist mobilized by Contractor on the site to ensure the implementation of environmental measures. Since there is no actual work of the environmental specialist, there is a high risk of the negative consequences dealing with non-implementation of EMP activities during the execution of construction works.

4. ENVIRONMENTAL MONITORING RESULTS

53. Control and management were directed to the following types of activity:

- ❖ supervision on the site: check-out jointly with environmental specialists of contractors and joint audit work;
- ❖ photo-recording of works: with the specified date and time of photo-shooting;
- ❖ interviewing of people on sites: concerning impact on workers, on the environment, on safety issues, health protection and work and also safety measures in the performance of work;
- ❖ meetings and consultations on issues and inconsistencies identified,
- ❖ verification of documentation: protocols of results of tool measurements, studying reports of environmental specialist: monthly, semi-annual;
- ❖ verification of legal documents: permissions and all legal documents related to ecological aspects.

4.1. General monitoring information conducted during the current period

54. During the reporting period, on Lot 4 the EMP has been agreed and approved on 3.03.2019. The Contractor has not submitted to CSC for approval certified laboratory to conduct independent EMP. There is no contract for the export and subsequent disposal and disposal of industrial waste at the landfill. The Contractor carries out the export of industrial waste and rubbish by obtaining one-time permits for export and placement at the landfill of Sagyz. Not received permission to extraction on project borrow pits, on Asphalt Plant not drafted and therefore not submitted documents for approval. Work on the site is carried out without the implementation of the EMP. The CSC held own audits 25.03.2019, 28.05.2019, 28.06.2019.
55. On Lot 5 signed in 13.06.2019 contract to conduct EMP. However, during the reporting period, work on the primary background measurement was not carried out. It is planned for the second half of this year. Environmental specialist on the site is not mobilized for a permanent time. Temporarily the environmental specialist with Lot 6 and Lot 7 combines this work. The environmental specialist presented a semi-annual report on the implementation of the EMP in this area. An environmental specialist on the site works remotely. CSC during the reporting period conducted audits without the participation of the environmental specialist: 13.03.2019, 25.03.2019, 17.04.2019, 28.05.2019. and 28.06.2019. The Contractor received on 26.06.2019 for a period of 6 years a license for exploration for project borrow pits. The scanned license versions are attached in Appendix 2. The next stage of obtaining a development license is expected in August 2019.
56. Lot 6 EMP approved by the CSC and agreed with the PMC on 5.06.2019, taking into account the comments of the national consultant of ADB. The Contractor entered into a 13.06.2019 contract to conduct EMP. However, in the reporting period, work has not started planning for the second half of this year. On the site is not mobilized for a permanent time environmental specialist. Temporarily this work combines the environmental specialist with Lot 6 and Lot 7. The environmental specialist presented a semi-annual report on the implementation of the EMP in this area. An environmental specialist on the site works remotely. CSC during the reporting period conducted audits on 13.03.2019, 25.03.2019, 17.04.2019, 28.05.2019 and 28.06.2019 without the participation of the environmental specialist:.
57. Resource on Lot 6: Before 16.01.2019 had been used diesel generator and since 17.01.2019 has been connected electricity. Contract was concluded with "Atyrau Zharyk" LLP for the supply of electricity to the base camp. The contract with JSC "KazTransGas Aimak" was signed. Specifications and connection point are available. In the second quarter, construction and installation work on the gas pipeline was completed. Since May, the supplier has been supplying gas to the facility. The contract with the Research Laboratory of "Analytical laboratory for environmental protection" LLP Atyrau is signed on 17.01.2019. Base line

measurements carried out on 6.06.2019. The report has not been submitted to the CSC for review.

58. In the previous reporting period, the CSC developed and issued recommendations for Lot 4 and 5 to address the identified problems. During the reporting period, monitoring at these sites showed that Lot 5 took note and carried out work to eliminate violations. For Lot 4, there is no progress on this issue. Table 12 below presents data on the elimination of discrepancies in the second half of 2018.

Table 12: Performance monitoring of recommendations on elimination of environmental non-conformances on Lot 4 and 5

№	Location	Problematic issue	The recommended measures	Implementation/ Compliance	Performance status
1	Mobilization of environmental protection specialists	CVs of candidates are not submitted for consideration by the CSC	Contact the employment Department of the territorial authority	Major non-conformance Since the CSC notified in writing from October on the acceleration of the mobilization of key personnel to the site	Lot 5: temporary combination of the environmental specialist from lot 7 and Lot 6. Lot 4: not completed.
2	Construction site	Not submitted for approval of the EMP and facility management plans	To develop the EMP and applications	Significant discrepancy. 2 written notification on plans submission	Lot 4: the EMP approved by CSC on 3.03.2019. Lot 5 – EMP is approved by CSC on 25.05.2019.
3	Base camp	Site selection Approval of the management plan and layouts	To accelerate the selection of the area and agreement development for temporary use or rent	In process	Lot 4 – the issue is closed Lot 5 – the issue is closed

59. Environmental compliance monitoring results for the Lot 6 are given in Table 13.

Table 13: Performance monitoring of recommendations on elimination of environmental non-conformances on Lot 6

№	Location	Problematic issue	The recommended measures	Implementation/ Compliance	Performance status
1	Road section	Using safety tools (protective glasses, gloves, special clothes, helmet, safety shoes	Availability of safety tools in base camp and on construction site.	Safety tools are provided for workers and Engineers as necessary	Provided

		and etc.) by workers and Engineers			
2	Base camp	Water supply	To provide drinking water and water for domestic use, wash basin in shower unit, toilet, kitchen and canteen. Cross-check and uninterrupted supply of drinking water	<p>Drinking water is bottled water, water for other domestic use is water from village's water system of Makat village.</p> <p>Yearly water consumption, m3:</p> <p>In 2019-2020 - domestic and drinking: 172 (0.63x273),</p> <p>technical - 1447 (5.3 x 273);</p> <p>in 2021 - 55 and 412;</p> <p>in 2022 - 29 and 218, respectively.</p> <p>According to note of clause 2.11 SNiP RK 4.01-02-2001 for project facility, it is allowed not to provide fire-fighting water supply.</p>	Provided
3		Sanitation and hygiene	<p>Providing toilet bowls and rinsing water in shower units.</p> <p>Transportation to septic tanks for processing and disposal</p>	<p>All containers for accommodation are provided with toilet bowls and rinsing water. Sewerage is merged into a septic tank, removed by the appointed organization</p>	<p>Provided common areas for hygiene and sanitation use.</p> <p>Septic tank is cleaned, log book for effluents disposal is recorded.</p>
4		Kitchen and canteen	Provision of appropriate ventilation, cranes and providing hygiene on eating and food storage places	The Contractor's own canteen in progress	Provided

5		Drainage in base camp	Provision of drainage water diversion in camp territory. To avoid accumulation of water inside of camp.	Accumulation of used water in the camp territory is still not recorded and not confirmed	Provided
6		SW and garbage	To control the location of garbage containers, agreement for disposal and waste utilization, filling of SW containers on base camp territory.	Household wastewater and feces are disposed by sewage truck to wastewater treatment facility of Makat Housing and Utilities sector. Agreement concluded for this kind of service. Water discharge quantity: $172 (55; 29) * 0,8 = 138 (44; 23) \text{ m}^3$.	Received conclusion of State Environmental Expertise No.: KZ23VDC000 75220 dated 22.11.2018 Concluded an agreement for SW disposal to landfill.
7	Quarry / soil borrow pit territory	Material stockpiling in accordance with the RK environmental legislation	To take permission for soil excavation at 8 borrow pits	According to the Terms of Reference (Attachment 1) and, based on the number of operational reserves, annual productivity of borrow pits for natural resources will be thousand m3: in 2019-2020 - 500; in 2021 - 150; in 2022 - 79.1.	Conducted. Received conclusion of State Environmental Expertise No.: KZ23VDC000 75220 dated 22.11.2018
8	Fire-fighting equipment in base camp and office	Fire-fighting equipment must be in base camp and office.	To put fire-fighting equipment in well visible place and in such way it can be used in case of emergency situation.	Fire extinguishers are placed on well visible places	Provided
9	Vehicle and equipment traffic in base camp	Excessive dust pollution in camp territory and noise impact to the environment as a result of vehicle traffic in camp territory and on site.	Equipment, which meets environmental standards for noise should be used on construction site and base camp.	Parking for vehicle is located far from office and accommodation.	Concluded an agreement with a certified laboratory for noise and vibration measurement.

					Parking for vehicle is located 25 meters away from office and 100 meters away from accommodations.
10	ACP	Providing PPE, medicinal and prophylactic food and milk. Dust control in territory and in storages.	Compliance with safety standards and requirements, compliance with FIDIC, contractual obligations	Document preparation for receiving Conclusion	In process. It is planned to receive permission documents in August 2019.

4.1.1. Environmental measurements on site under Lot № 7

60. Measurements on the vibration and noise level, as well as the air pollution level, were carried out in accordance with the approved scheme of measurement points. Picture 4 below shows a diagram with noise and vibration measurement points, as well as points for measuring the air pollution level.



Picture 4. Scheme of measurement points for noise and vibration level, atmospheric air pollution

4.1.1.1. Noise and vibration

61. According to the Guidelines of the International Finance Corporation “Environment, Health and Safety Guidelines” maximum permissible level (MPL) of noise for construction areas identified at 85 dBA and a peak (instantaneous) noise loads are not higher 140дБа, and for residential areas - 70дБа. The national standard (Hygienic Standard No. 169 dated 28.02.2015) defines MPL of noise at construction areas is 80 dBa and for operator’s work in laboratory, Asphalt plant - 90 dBa, and MAL at residential areas - 60 dBa. For vibration acceleration permissible equivalent corrected level is determined by Hygienic normative within 107122 dB. The national standard was used for this report because it is more demanding for the meaning of MPL.
62. Measurements of the level of vibration acceleration and noise were carried out by specialists of RSE “National Center of expertise” at the Committee of the Ministry of HEALTH of Atyrau region. According to the protocols of monitoring works, measurements were carried out at the points where background measurements were carried out: the construction section of the road (the beginning of the section Km 487, the middle of the section Km 500 and the end of the section Km 504), on the border of the sanitary protection zone Km 510 (beginning, middle and end). On the borrow pits measurements were not carried out due to lack of work.
63. According to protocols of noise level measurements, at the maximum allowed level of 80 dBA (according to GN) on Asphalt Plant values within a 66-77db are recorded. Noise level measurements at construction points of the road the are recorded within the same limits.
64. According to the protocols of measurements of the vibration acceleration level in these areas, the measurements showed that the value of the maximum permissible level were not exceeded at measurement points had. So in the measurement points, according to the protocols of measurements, in the Laboratory of the Contractor recorded the maximum value – 54.2 dB, and in the operator – 60.3 dB. These values do not exceed the set permissible levels of vibration acceleration.
65. All indicators on Noise and Vibration do not exceed the maximum permissible level. It is necessary to take into account the recommendations (General guidelines for the protection of the environment, health and labor. 30.04.2007 IFC) on the application of following protective measures: personal protective equipment, the protection time registration of the values of the noise levels over 80 dBA. Application 3 contains data from noise and vibration measurement protocols.

4.1.1.2. Soil

66. Measurements of soil contamination. Permanent disposal of production wastes is not carried out on the enterprise territory, temporary storage of production and consumption wastes is carried out with keeping necessary requirements excluding impact on soil cover. The movement of construction equipment is carried out on existing roads. Due to it, soil monitoring is not included in environmental production control plan. But at the same time to reduce the impact on land resources, the Contractor included a number of measures in the Environmental Management Plan of this project:
 - compliance with the technological work cycle;
 - fuelling and replacing FLM in specially designated areas;
 - dust control on the construction work sites;
 - traffic of construction machineries is carried out on existing roads.

4.1.1.3. Water quality

67. There are no sanitary protection zones for water sources on the contractor's territory. As a source of technical and drinking water, water is used from water towers, which are located in the villages of Dossor and Makat, which are serviced by the KGP "Atyrau su Arnasy". During the construction of the facility, water is used for household and industrial needs. Water control is not provided since drinking and technical water supply is provided from the water supply system, which is located in

the Makat village and is maintained by the state enterprise "Atyrau su Arnasy". The quality of drinking water meets sanitary and epidemiological requirements.

4.1.1.4. Ambient air quality

68. Monitoring carried out at the points specified in the Contractor's SSEMP. According to the presented sampling protocols and their results during the sampling the following atmospheric air, climatic parameters were recorded: wind speed, direction, barometric pressure, humidity, temperature. Measurements were carried out on June 7, 2019, on the following indicators: inorganic Dust, suspended particles on Asphalt Plant, nitrogen Dioxide, Sulfur Dioxide, Carbon Monoxide, Formaldehyde, Hydrocarbons C12-C19, hydrogen Sulfide. Application 4 to this report presents the results of air pollution measurements in the first half of the year, as compared with the background indicators for Asphalt Plant (Km 504) at four points and two points at the construction site.
69. According to the protocols, the level of contamination at Lot 7 site does not exceed the MAC for all monitored indicators. The impact on the environment is temporary and has no negative impact.

4.2. Trends (general directions)

70. Lot 7, construction work was scheduled to be completed on 30 May 2019, but the contractor issued a notice of completion on 31 July 2019. In General, all EMP activities in this area are carried out in the declared volume and quality. During the reporting period, the contractor remained the amount of work on the backfilling of the final layers: the upper layer of the coating SMA-20 5cm high, the Lower layer of the coating h/c porous AC, h-9cm, the top layer of the base of high-porous AC height of 10cm, the bottom layer of the base of SGM (C4), the Underlying layer of SGM height of 20cm throughout the site. Pollution control was carried out in June. During the reporting period, the report is not submitted to the CSC for review.
71. Lot 4 situation of the EP and the implementation of the EMP is alarming and of particular concern. The complete lack of information on the implementation of the EMP. The site is not mobilized environmental specialist. It is likely that the reporting to the fiscal authorities is not carried out by the contractor on this lot, it is expected penalties from environmental agencies.
72. Lot 5 and Lot 6 contractor "Akzhol Kurylys" LLP having a positive experience on Lot 7 is gradually taxiing the situation on the EP in these areas. The non-conformance tracking table (Application 1) shows that the contractor has resolved all non-conformities in a short period of time. CSC considers that this contractor will be able to carry out works on EP at rather a good level, on condition of formation of the team on EP separately for each site.

4.3. A summary of the monitoring results

73. In the current situation on the site Lot 4, Lot 5 and Lot 6 it is not advisable for the CSC to carry out additional monitoring activities since instrumental measurements were not carried out within the specified time in the EMP of these sites. Drastic measures need to be taken by the PMC to obtain effective feedback from contractors.
74. In the areas of Lot 6 and Lot, 7 instrumental measurements were carried out, but the report on them is not submitted to the CSC for review. Contracts with a certified laboratory specify a schedule for reporting within a week after sampling. But in fact, this point is probably violated. In this connection, the results of the EMP on Lot 6 – 6.06.2009 and on Lot 7 - 7.06.2009 are not presented to the CSC for review. Only protocols are presented.
75. Observations and audits of the CSC at all sites indicate that there is no negative impact of construction works on the environment on Lot 7. The measures taken by the Contractor on Lot 7 to prevent negative impact on the environment are sufficient. The observations revealed that the Contractor adheres to the dust suppression schedule, the waste disposal plan, the road safety plan, the quarry management plan. The contractor's operation shows the permissible load on the environment.

76. The results of the environmental monitoring of the sites, taking into account the previously identified inconsistencies, are presented in Table 13 below

Table 14: Monitoring results of works on environmental protection

No	Location	Problematic issue	The recommended measures	Implementation/ Compliance	Performance status
1	Road site	Use of safe tools (safety glasses, gloves, overalls, helmet, safety shoes, etc.) by workers /engineers.	Existence of safe tools in the base camp and on the construction site.	Safe tools are provided to workers and engineers as necessary	Provided on Lot 5, Lot 6 and Lot 7 Not provided on Lot 4
2	Base camp	Water supply	Provide water for drinking and for household needs, the presence of a sink for washing in the shower, toilet, kitchen and dining room. Cross-control and uninterrupted supply of drinking water	Water for drinking is bottled water, for other economic needs – from the nearest settlements on the basis of the contract According to the note of paragraph 2.11 of SNiP RK 4.01-02-2001 for the designed object, it is allowed not to provide fire-fighting water supply.	Provided on all Lots
3		Sanitation and hygiene	The provision of toilets and wash water in the shower. Transportation to septic tanks for treatment and disposal	All trailers for housing are provided with toilets and washing water. Sewage is discharged into septic the capacity is exported by the designated organization	Provided for Lot 5, Lot 6 and lot 7 by prolongation of the contract in 2018. Exported on the basis of a contract with a specialized company. Lot 4 does not provide a contract for cleaning the septic tank
4		Kitchen and dining room	Ensuring proper ventilation, taps and hygiene of places of eating, food storage	In the process of organizing of own dining room	Provided for Lot 6 and Lot 7
5		Drainage in the base camp	Ensuring the drainage of water in the camp. Avoid accumulation of water inside the camp.	Accumulation of used water on the territory of the base camp has not yet been detected and confirmed	Provided on all Lots
6		Solid waste and rubbish	The location of garbage containers, the contract for the export and disposal of waste, the filling of waste	Sites of temporary storage of SW in accordance with	Lot 4 – not provided. Until June 30 as a temporary measure has been received

			containers to control the territory of the base camp.	norms and requirements. Waste disposal logs Waste passports	a permit from Akim of Sagyz village for one time removal of SW and disposal on village landfill by their vehicles. Lot 5 IE Kabul Contract №07/2019 from 06.03.2009 Lot 6 and Lot 7 – all measures are provided and observed
7	Territory of borrow pit/soil borrow pit	Collection of material compliance with the legislation of the Republic of Kazakhstan on environmental protection	To obtain permission to excavate soil for quarries	According to the terms of Reference	All sites in the process of obtaining a permit for seizure
8	Fire-fighting equipment in the camp, office.	Fire-fighting equipment should be located in the base camp and in the office.	Place the fire-fighting equipment in a visible place and in such a way that it can be used in case of an emergency.	Fire extinguishers are located in a visible place	Provided for Lot 5, 6 and Lot 7
9	Traffic and equipment in the base camp.	Excessive dust pollution in the camp and noise pollution from traffic in the camp and the site.	The construction site and the campsite shall be equipped with equipment that complies with environmental noise standards.	Parking for vehicles is located far from the office and living space.	Secured at all sites
10	Asphalt Plant	The provision of PPE, provision of meals and milk Dust suppression in the territory and warehouses	Compliance with safety standards and requirements, ensuring compliance with the terms of FIDIC, Contractual obligations	Preparation of documents for the conclusion	Lot 5 and 6 in progress. It is planned to receive in August 2019. Lot 4 – no information

4.4. Use of Material Resources

4.4.1. Current Period

77. *Lot 4 site.* Water delivery for construction needs is planned to deliver by vehicles from project source which is more than 30 km away. There are no data on expenditure for the reporting period.

A site for water intake and water storage tanks has been prepared. There are no data on the volume of water used during the reporting period.

78. *Lot 5 and Lot 6 sites.* During the reporting period applications have been submitted for receiving technical specifications on communications: water, electricity, gas. Permission was not received. The data on amount of resources given for use are not available.
79. *Lot 7 site.* In comparison with the previous period, the consumption of natural gas in the reporting period exceeded most likely due to the inclusion in the full functioning of Asphalt Plant. The consumption of industrial water has decreased 10 times due to the reduction in the volume of work and the introduction of a lean approach in this area.

Table 15. Number of resources consumed for the 1st half of 2019

sites resources	Lot 7
Electricity, kWh	187 774
Natural gas, thousand m3	210.238
Drinking water, m3	No data
Water for technical needs, m3	2 617

4.4.2. Cumulative use of resources

Table 16. Total use of resources in 2019

Sites Resources	Lot 6	Lot 7
Electricity, kWh	305 329	187 774
Natural gas, thousand m ³	No data	210.238
Drinking water, m ³	2 227	No data
Water for technical needs, m ³	No data	2 617

4.5. Waste management

80. Waste management is organized by Contractors according to the developed EMP's attachment plans. The whole management process is based on two stages. The first stage consists of the work on the organization of temporary storage of SW and hazardous waste. The second stage includes work on the organization of the waste removal process with the involvement of specialized companies. Places for the temporary storage of SW, hazardous waste are organized on the territory of Production bases. Waste from the territory is stored on a specially organized site for temporary storage with subsequent removal for disposal through the involvement of specialized companies. Removal of SW and effluent according to the Lot 6 and 7 is carried by "WEST DALA" LLP which concluded the contract on 29.03.2018 and "Tazalyk - Koga" LLP - the contract is concluded on 05.02.2018. All contracts extended until the end of the project.
81. Lot 4, the export of sewage and waste products is organized on the basis of obtaining a temporary permit from the Akimat of Sagiz village before concluding a contract with a specialized company. No data are available on the quantity of exported production waste. The contractor is currently in the process of finding a specialized company to enter into the contract.

82. Lot 5, the Contractor concluded contracts with specialized companies involved in Lot 7. Data on quantity and volume are not provided during the reporting period.

4.5.1. Current Period

Table 17: Information on the solid waste disposal for the first half - Lot 7 and Lot 6

Site	Name of waste	Unit	Waste classification	Quantity	Waste disposal method
Lot 7	SMW	m ³	not hazardous	18	Removal and disposal at the landfill
	Liquid drains	m ³	Do not qualify	2 997	Removal and disposal at the landfill
Lot 6	SMW	m ³	not hazardous	22	Removal and disposal at the landfill

4.5.2. Total waste generation

83. For the period of 2018 and the first half of the year together, 22.24 m³ of SW was removed to Lot 7. Amount of liquid drains was in total of 3 308 m³. By Lot 6 in aggregate, MSW is 22 m³. There are no data available for Lot 4 and Lot 5.
84. Based on the results of monitoring of waste management activities, recommendations were issued for contractors to make corrective actions in waste management plans. Environmental specialist for Lot 6 and Lot 7 sites has to do following:
- carry out information and explanatory work among its employees on environmental safety at residential facilities, at the construction sites and in the immediate vicinity of settlements.

4.6. Health and safety

4.6.1. Public health and safety

85. During the reporting period, the Contractors carried out activities in accordance with the approved plans of the road safety Department. Timely supervision and accompanying advice from the CSC road safety engineer ensured the safety of road users and the Contractor's personnel. During the audit periods, the presence of relevant work on the part of Contractors Lot 6 and Lot 7 on the installation of safety signs, widening of temporary roads, patching, preparation for activities for winter maintenance of roads was noted. Dangerous areas are marked with warning signs.
86. Lot 4 and Lot 5 - work does not comply with Safety plans. During the audit of the site, the absence of safety signs on bypass roads was noted. Not properly work was carried out during the winter maintenance of roads.

4.6.2. Health and safety of workers

87. To ensure health protection medical centers are organized on the Lot 5, Lot 6 and Lot 7 sites. They are located on the territory of the base camp of Contractors. There are two certified health workers in each medical center. All workers undergo a medical examination for general health every morning before work, what is further recorded in the logs. This

procedure takes place without exception, for all workers of the Contractor, as it is necessary to obtain from the medical worker admission to work. Workers can also contact with the health center at any time for additional assistance. The first-aid post at Lot 6 and Lot 7 sites are equipped with all the necessary medicines, according to the list, for such items and medical supplies for the organization and provision of first aid. On Lot 4 and Lot 5 medical centers are organized, but need to be equipped by all the necessary resources.

88. All Contractors at the sites have developed a health and safety Program. It includes health care and preventive measures for the non-proliferation of STIs, STDs, HIV/AIDS among workers and the local population. For the implementation of these plans for the reporting period provided for Lot 6 and Lot 7. On Lot 4 and Lot 5, this work was moved to the 3rd quarter of this year.
89. On Lot 7 for emergencies at the facility, the Contractor signed a contract for the provision of emergency assistance to the state "Makat Central district hospital". In accordance with the Order of the Minister of national economy of the Republic of Kazakhstan dated June 6, 2016 № 239 "On approval of Sanitary rules "Sanitary and epidemiological requirements for the implementation of industrial control" residential town, places for eating (dining), toilets (bathrooms) are equipped with bactericidal irradiators - air disinfection devices. Once a quarter, derivatization and disinsection of the town and office premises of the production base are carried out.
90. On Lot 6 in a residential camp, in places for eating (dining room), restrooms (bathrooms) are provided with bactericidal irradiators - air disinfection devices. Once a quarter, derivatization and disinsection of the town and office premises of the production base are carried out. The medical center organized a free provision of contraceptives.
91. In the areas of Lot 6 and Lot 7 noted that all employees who are hired are Introductory safety instructions. All entries are logged by a specialist safety, health and safety, and checked a specialist Engineering Service. Daily briefing is held at the workplace, which is also recorded in the logs.
92. Name of available log-books from specialists of the Contracting organization:
 - Introductory briefing log-book;
 - Log-book of instructing registration in a workplace;
 - Log-book of briefings on fire safety;
 - Log-book of accidents registration;
 - Log-book of PPE issue;
 - Log-book of carrying out tests and recharge of fire extinguishers;
 - Log-book of medical registration examination of the drivers who are coming out;
 - Log-book of records of medical examinations of hired drivers;
 - Log-book of registration of employees seeking medical care;
 - Log-book of introductory instruction on road safety;
 - Log-book of road accidents registration;
 - Log-book of accounting violations of traffic rules;

Tailboard meeting of compliance with Safety and Road Safety measures before the start of work is an integral part of daily practice.

93. During the reporting period, two incidents were registered at the site. 11.06.2019 on 423 km (PK 057+00) (Lot 6) road "Aktobe-Makat" occurred traffic accident, the collision of two vehicles. As a result of road accident, there were no fatalities. The Contractor informed about the incident in writing Ref. Number AA-150-2019 from 14.06.2019.

94. The second incident occurred 22.06.2009 between 18-19:00 hours of local time, on PK 108+00 highway "Aktobe-Makat" (Lot 7) accident with the operator of the asphalt plant. At the end of the working day, the operator of the asphalt plant Kosym K left his workplace and reached the place of asphalt laying on the road, wanted to measure the temperature of asphalt and inadvertently fell from the body of trucks. He injured his right sciatic bone in the fall. The victim was hospitalized in Atyrau regional hospital, in the Department of traumatology. Engineer's Letter No. SEAM D-2-1200 of 25.06.2019. Contractor's Letter No. ANT-CS-104-2019 of 26.06.2019.

Table 18: Statistics on incidents and accidents on the project

Name	Lot 4	Lot 5	Lot 6	Lot 7
Traffic accident	0	0	1	0
Accident	0	0	0	1
Disability	0	0	0	0
Downtime due to incident	0	0	0	0
Total:	0	0	1	1

95. Compared with the previous period, when there were only data on Lot 7 recorded 3 accidents, in the reporting period there was 1 accident incident.
96. In the preventive purposes on the fact of the above accidents, accidents engineer of safety and health regulations, road safety has carried out extra training, making appropriate entries in the log instruction.
97. Additional safety measures in Lot 6 and 7:
- To ensure continuous movement of vehicles and security vehicles and transportation population, traffic signs carefully checked for purity and damage. Department of Road Safety, Safety chiefs and specialist Engineering Services work closely together;
 - Engineers health and safety, and for road safety has developed a program "labor Protection and safety in the night", and regularly inspected (inspection) of the site both during the day and at night. If a violation of security measures is detected, a warning is given to both the employee and the road safety specialist, labor safety of the Contractor, with a repeated violation, prescriptions and letters are drawn up to eliminate the revealed violations;
 - Specialists of the Contractor assist to help the civilians while eliminating technical faults with their vehicles. In General, the current situation of compliance with safety and road safety measures can be considered significantly improved, as evidenced by accident statistics.

4.7. Training

98. During the reporting period, training on issues related to the implementation of the EMP, monitoring of works on the site, etc., was conducted by the CSC as an accompanying consultation during environmental audits on a monthly basis from March to June inclusive. During the audit, the SCS drew the attention of the contractor's environmentalists to the fixation of indicators for the implementation of environmental protection measures, trained on-site to identify potential risks of negative impact on the environment.

99. Safety Engineer and Labor Safety engineers, Road Safety contractors are constantly monitoring on the site for compliance with safety precautions and safe work, the use of personal protective equipment. In the residential part of the base camps in the restrooms there are information boards with information about the main threats and risks in the workplace.
100. Planned by CSC earlier in the first quarter of 2019 training on the topic: “Environmental, social security on road construction projects” was held on May 25 for specialists ecologists, Safety and Road Safety specialists all lots. The training program includes issues on the preparation of analytical reports on protective measures, identification and formulation of risks and development of corrective measures to eliminate negative impacts and inconsistencies. Also included is a session on social and environmental performance standards. A press release on the training and a list of participants are attached in Application 5.

5. ENVIRONMENTAL MANAGEMENT PLAN FUNCTIONING (SITE-SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN)

5.1. SSEMP Review

101. The EIA of this project for the construction phase identifies possible environmental impacts, which are presented in Table 19 as test indicators for proper monitoring of the tasks:

Table 19: Information on the activities of the EMP with the project EIA

The types of possible impacts according to the EIA	Objects and subjects of influence	Reflection of activities in the EMP			
		Lot 4	Lot 5	Lot 6	Lot 7
Improper location of facilities (construction camps, excavation sites, quarries, material storage sites and MSW/industrial waste, etc)	Water quality, soil pollution, local communities	+	+	+	+
Dust and emissions	Local community	+	+	+	+
Uncontrolled operation of water sources	Local community	+	+	+	+
Poaching, extermination of birds and animals, rare and endangered plant species	Flora and fauna of the region	+	+	+	+
Violation of technical regulations when transferring communications	Local community	+	+	+	+
Violation of the law in the detection of previously undetected archaeological and cultural values	Cultural and historical heritage, Local community	+	+	+	+
Violation of issues on safety and health of project affected people	Local community Workers involved in the construction work of the project	+	+	+	+
SSEMP approval status	EMP and attachment plans	3.03.19	26.05.19	20.05.19	23.05.18

102. According to the results of the second half-year report of 2018, the CSC developed and issued a plan of corrective actions to eliminate inconsistencies. Table 20 below provides information on the status of corrective actions for all Lots.

Table 20. Status of implementation of the corrective action Plan for the period January-June 2019

Activity	Terms	Responsible	Expected result	Performance status
Mobilization of key personnel for environmental protection and conservation measures	January 2019	Contractor's Project manager	Agreed and approved candidate at the site with a permanent work schedule	Lot 4 is not mobilized. The previously approved specialist left the site in March 2019.
To provide EMP and facility-specific plans for coordination and approval	January 2019	Contractor's Project manager	Accepted and approved by the EMP for Lot 4 and Lot 5	Lot 4 approved EMP on 3.03.2019 Lot 5 – 26.05.2019
Training in cooperation with the PMC and CSC for Contractor's environmental specialist and sociologists	February-March 2019	CSC	Environmentalists have all the tools to maintain weekly records and their own audits, formed the skills to compile reports and conduct monitoring and evaluation of the activities of the EMP.	Held on May 25, 2019 on the site Lot 6 v. Zhamansor for specialists of all Lots 4, 5, 6 and 7
Develop and approve the schedule of export of MSW from places of temporary storage from all objects including office of the engineer, the construction site, production base, laboratories, and so forth.	February 2019	Contractor's Environmental Specialist For Lot 6	Approved document with the journal of accounting for the removal of SW and industrial waste. Effective waste management	Performed Lot 5, Lot 6, Lot 7 Not performed on Lot 4
Present the health and safety program and plans	February 2019	Contractor's Environmental Specialist Lot 6	Agreed Health and safety plan and programme, Compliance with contractual conditions in terms of health and safety	Completed 29 March 2019

6. ADVANCED METHODS AND OPPORTUNITIES FOR IMPROVEMENT

6.1 Advanced methods (good practitioners)

103. Noted earlier in the report of the second half of 2018 on Lot 7 as a good practice of interaction with the external environment, during the first half of the year Lot 7 continued to use this practice. The contractor continued to maintain good communication with the local population, which allows him to remove any problems in a short time. This practice is used on Lot 6.

104. This practice has enabled the Grievance Mechanism to work effectively on these sites. On the lot 7 and 6 is not recorded a single appeal. But Lot 6 is installed boxes for calls. All questions are resolved on the spot in working order. During the reporting period on Lot 4, 5, 6 and 7 during the reporting period, no complaints and appeals were registered.

6.2 Opportunity for improvement

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

7 BRIEF CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

106. Effective protective measures on the project include the following:

- proper planning of construction works on Lot 7, which allowed the Contractor not to accumulate a large number of equipment in small areas, especially in sensitive areas. Constant adjustment of the schedule of watering machines, taking into account all factors affecting the process of dust;
- the organizational structure on lot 7, to effectively operate the safety management system of the environment. Vertical and horizontal interactions are included in the organizational structure of contractors and employees of linear structures (masters, foremen, etc.) are involved in this process.)
- training for staff conducted by the contractor's ecologist on Lot 6 and Lot 7. On the topics of waste segregation, response to environmental incidents: spills, destruction of septic tanks, pollution of water bodies, etc.

107. On the site Lot 5 and Lot 6, combining the positions of the environmental specialist is not an effective approach except for saving financial resources under this article on staff salaries. This combination has affected the timing of reporting on EMP. For EMP in areas Lot 6 and Lot 7 reports are not provided.

108. On the lot 4 site, the lack of an environmental specialist affected to lack of reporting on this Lot, the lack of implementation of measures for the EMP, and as a consequence, the creation of an alarming situation on the EP on the site because there is no possibility for the CSC to check the actual performance of work, to obtain the necessary information on the EP.

7.2. Recommendations

109. Based on the monitoring of the implementation of the EMP in the sites, the CSC developed a corrective action plan. This plan is presented in Table 21 below.

Table 21. Corrective action plan

Activities	Terms	Responsible	Expected result
Mobilization of key personnel for environmental protection and conservation measures for Lot 4 and Lot 5	July 2019	Contractor's Project manager	Agreed and approved candidate at the site with a permanent work schedule
According to the Plan for health and safety to carry out activities and submit a report	August 2019	Environmental Specialist Lot 4, Lot 5, Lot 6	Activity report, photo report and list of participants.
Submit for approval of the CSC independent laboratory for conducting EMP for Lot 4	July 2019	Environmental Specialist	Contract with a certified laboratory
Perform background measurements on Lot 4, Lot 5 EMP	July 2019	Environmental Specialist	Measurement protocols, EMP report

EMP Reports submit to CSC in a timely manner	Since July 2019	Environmental Specialist Lot 4, Lot 5, Lot 6 and Lot 7	EMP reports are submitted by the 30th of the month of EMP
To improve performance discipline of environmental reporting to CSC	Immediately	Site Managers	Monthly report up to the 5th day following the reporting period, quarterly reports up to the 10th day of the following month for the reporting period, semi-annual report up to the 10th day following the reporting period.

110. ADB's Mission recommended the CoR to hire qualified Environmental Specialists with enough input to monitor implementation of the Environmental Management Plans on Lots 4-6. In addition, CSC recommends the COR to increase the input of the CSC safeguards specialist since has been involved in the structure of the CSC, since periodic involvement and discontinuity of work schedule of this specialist does not facilitate effective work with local environmental specialists. Remote work partly leads to the fact that not all plans (objective) can be tracked in terms of the implementation and analysis of this work.

Applications

Applications No. 1

Discrepancies Data on sites Lot 4, Lot 5, Lot 6 and Lot 7

№	Section/Location	Date of registration	Category	Issue Description	Corrective action	No. notice of noncompliance.	The level of non-compliance	Execution date	Priority	Responsible	Status	Closed date	Comments
1	Lot 6, base camp Zhamansor Km 435	19.03.2019	Health	accommodation in residential trailers without compliance with sanitary and hygienic standards for 1 person	to settle bored posted workers	N1	Significant	01.04.2019	Medium	Gulzhanat	Open		
2	Lot 6, base camp Zhamansor Km 435	19.03.2019	Environment	not submitted to the Engineer for approval of EMP and HSP	to provide the final version of the EMP	N2	Significant	29.03.2019	High	Gulzhanat	Closed		
3	Lot 6, construction site and base camp Zhamansor	19.03.2019	Health	not submitted to the Engineer for approval Posy database, Information on prevention of HIV/AIDS, STDs/STIs	to submit the actual plans	N3	Significant	28.03.2019	High	Gulzhanat	Closed	29.03.2019	all comments and remarks of the Engineer are taken into account
4	Lot 6, base camp Zhamansor Km 435	19.03.2019	Health	preventive food is not provided, there are no dairy products in the menu, there is no provision of drinking water (bottled according to the norms)	to replace the service provider's supply	N4	Significant	31.03.2019	Medium	Almas (Safety specialist)	Closed		supplier of food services and domestic services replaced
5	Lot 6	19.03.2019	Social impact	the mechanism of work with appeals and complaints is not started	appoint a responsible person and hold public consultations with the local population	N5	Significant	01.04.2019	High	Nurlan Zholdybayev (Project Manager)	Closed		boxes are installed in the town in front of the checkpoint, in the building of the dining room and in the akimat of Zhamansor
6	Lot 6	20.03.2019	Other	the contractor did not complete the team of specialists on protective measures: safety specialist, sociologist	submit CV for approval by the Engineer	N6	Significant	10.04.2019	Medium	Nurlan Zholdybayev (Project Manager)	Closed		

1st Semi-Annual Environmental Monitoring Report for 2019

CAREC Corridors 1 & 6 Connector Road (Aktobe–Makat) Reconstruction Project (section km 330–504) / Contract 02-ADB/CSC-2017 (CSC-2)

7	Lot 4 in Sagiz village	25.03.2019	Social impact	aggressive behavior of destructive youth groups of p. Sagyz. Threats of physical violence, unauthorized visit to residential and office premises of the contractor	the entire staff of the Contractor with clause Sagiyz to move in the rotational camp. Hire a security firm to ensure the safety of the contractor's employees. Prohibit employees from leaving the camp without security escort. To act and fix destructive behavior of local residents. To participate in the offsite meeting of state bodies, organized by the Employer	N7	Significant	15.04.2019	High	Fan (Project Manager)	Closed		joint work with "KazAutoZhol"
8	Lot 4 in Sagiz village	25.03.2019	Safety	employees are not provided with Special clothing and footwear, PPE	provide seasonal work clothing and footwear, as well as PPE	N8	Существенный	01.04.2019	High	Muratkhan (Health Safety and Road Safety specialist)	закрыт		28.03.2019 the first batch of special clothes and shoes, PPE in the amount of 45 sets was delivered
9	Lot 5 base camp km 378	26.03.2019	Safety	employees of the subcontractor on construction of buildings of the shift camp are not provided with Special clothes and footwear, PPE	provide seasonal work clothing and footwear, as well as PPE	N9	Significant	01.04.2019	High	Muratkhan (Health Safety and Road Safety specialist)	Closed		
10	Lot 5	26.03.2019	Environment	EMP not submitted	submit to the Engineer of the EMP with all site plans	N10	Significant	10.04.2019	High	Adilbek Project Manager	Closed		
11	Lot 4, Lot 5, Lot 6	17.04.2019	Environment	there is no contract for EMP.	submit for approval of the KNS certificates and licenses of laboratories	N11	Significant	25.04.2019	High	Site managers	Partly		for Lot 6 agreed laboratory . For Lot 5 and 4 contractors did not provide data
12	Lot 4, Lot 5, Lot 6	28.05.2019	Safety	fire shields do not correspond to the scale of the town and the number of buildings.	bring into compliance with regulations and requirements	N12	Significant	01.06.2019	High	Site managers	Closed		
13	Lot 4	28.05.2019	Safety	not provided with special clothing and footwear, no PPE, no first aid kits in offices and residential buildings, no medical center	specialist of Health and Safety to organise full protective Clothing and footwear, PPE. Form a medical center	N13	Significant	01.06.2019	High	Site managers	Open		

Exploration licenses for lot 5



в течение каждого года с четвертого по шестой год срока разведки включительно **2 300 МРП;**

4) дополнительные обязательства недропользователя:

а) **обязательство по ликвидации последствий недропользования в пределах запрашиваемых блоков при прекращении права недропользования.**

4. Основания отзыва лицензии:

1) нарушение требований по переходу права недропользования и объектов связанных с правом недропользования, повлекшее угрозу национальной безопасности;

2) нарушение условий и обязательств, предусмотренных настоящей лицензией;

3) дополнительные основания отзыва лицензии: неисполнение обязательств указанных в подпункте 4 пункта 3 настоящей Лицензии.

5. Государственный орган, выдавший лицензию **Министерство промышленности и инфраструктурного развития Республики Казахстан.**

Вице-министр
промышленности и
инфраструктурного развития
Республики Казахстан
Т. Токтабаев

подпись

Место печати

Место выдачи: **город Нур-Султан, Республика Казахстан.**



Лицензия

на разведку твердых полезных ископаемых

№144-EL от «26» июня 2019 года

1. Выдана Товариществу с ограниченной ответственностью «Ак жол кұрылыс», расположенному по адресу Республика Казахстан, Мангистауская область, Тупкараганский район, село Таулик, ул. Ардагерлер 16 (далее – Недропользователь) и предоставляет право на пользование участком недр в целях проведения операций по разведке твердых полезных ископаемых в соответствии с Кодексом Республики Казахстан от 27 декабря 2017 года «О недрах и недропользовании» (далее – Кодекс).

Размер доли и праве недропользования: 100 % (сто процентов).

2. Условия лицензии:

1) срок лицензии: 6 (шесть) лет со дня ее выдачи.

2) границей территории участка недр: 1 (один) блок:

1.-40-1-(106-56-12)

3) иные условия недропользования: нет.

3. Обязательства Недропользователя:

1) уплата подписного бонуса в размере 252 500 (двадцать пять тысяч две тысячи пятьсот) тенге до «10» июля 2019 года;

2) уплата в течение срока лицензии платежей за пользование земельными участками (арендных платежей) в размере и порядке, установленном налоговым законодательством Республики Казахстан;

3) ежегодное осуществление минимальных расходов на операции по разведке твердых полезных ископаемых:

в течение каждого года с первого по третий год срока разведки включительно 1 200 МРП;

в течение каждого года с четвертого по шестой год срока разведки включительно 1 200 МРП;





Лицензия **на разведку твердых полезных ископаемых**

№145-EL от «26» июня 2019 года

1. Выдана Товариществу с ограниченной ответственностью «Ак жыл кұрылыс», расположенному по адресу Республика Казахстан, Мангистауская область, Тупкараганский район, село Таучик, ул. Ардагерлер 16 (далее – Недропользователь) и предоставляет право на пользование участком недр в целях проведения операций по разведке твердых полезных ископаемых и соответствии с Кодексом Республики Казахстан от 27 декабря 2017 года «О недрах и недропользовании» (далее - Кодекс).

Размер доли в праве недропользования: 100 % (сто процентов).

2. Условия лицензии:

1) срок лицензии: 6 (шесть) лет со дня ее выдачи;

2) границы территории участка недр: 2 (два) блока:

L-40-I-(10a-5b-25);

L-40-I-(10b-5a-21)

3) иные условия недропользования: нет.

3. Обязательства Недропользователя:

1) уплата подписного бонуса в размере 252 500 (двадцать пять тысяч две тысячи пятьсот) тенге до «10» июня 2019 года;

2) уплата в течение срока лицензии платежей за пользование земельными участками (предных платежей) в размере и порядке, установленным налоговым законодательством Республики Казахстан;

3) ежегодное осуществление минимальных расходов на операции по разведке твердых полезных ископаемых:

в течение каждого года с первого по третий год срока разведки эквивалентно 1 800 МРП;



Application No. 3

Results of noise level measurements Lot 7

Location/ Measuring point	Maximum permission lever of the noise level (dBA)	Before starting construction works (dB)	07.06.2019 (dB)
Borrow Pit № 1	80		
Borrow Pit № 2	80		
Borrow Pit № 3	80		
Laboratory	90		
Windward /leeward construction road	80		
Asphalt Plant, Base Camp point 1	80		66
Point 2	80		72
Point 3	80		77
Point 4	80		63

The results of measurements of Vibration level Lot 7

Location/ Measuring point	Maximum permission lever of the noise level (dBA)	Before starting construction works (dB)	07.06.2019 (dB)
Borrow Pit № 1	70		-
Borrow Pit № 2	70		-
Borrow Pit № 3	70		-
Laboratory	70		54,2
Construction road (Km 487, Km 500, Km 504)	70		-
Asphalt Plan office	70		60,3

Results of atmospheric air measurements for Lot 7, Asphalt Plant Km 510

Sampling points	Name of pollutants (mg/m3)	Measurements prior to construction 4.06.18 mg/m3	Norm MPC M. R, mg/m3	07.06.2019 mg/m3
Border of sanitary protection zone Point 1	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0	1	
	Hydrogen sulphide	0,005	0,008	
Border of sanitary protection zone Point 2	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0,02	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,005	1	
	Hydrogen sulphide	0	0,008	
Border of sanitary protection zone Leeward point -3	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,005	1	
	Hydrogen sulphide	0	0,008	
Border of sanitary protection zone Leeward point -4	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,005	1	
	Hydrogen sulphide	0	0,008	
Borrow Pit № 2 Km 491	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0	5,0	
	formaldehyde	0,05	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,02	1	
	Hydrogen sulphide	0	0,008	
The beginning of the construction road section of Km 487	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,005	1	
	Hydrogen sulphide	0	0,008	
Construction road mid-section 500 Km	Suspended solids	-	0,5	
	Nitrogen dioxide	0,02	0,2	
	Sulphur dioxide	0,01	0,5	
	Carbon oxide	0,02	5,0	
	formaldehyde	0,02	0,051	
	Hydrocarbons C ₁₂ -C ₁₉	0,005	1	
	Hydrogen sulphide	0	0,008	

POST-RELEASE

Training on health, safety and road traffic, as well as on social and environmental protection measures as part of the Aktobe-Makat road Reconstruction Project connecting CAREC corridors 1 and 6.
Project number: № 3416-KAZ

22 May 2019 in the village Nogayty Bayganinsky district of Aktobe region held a training for the specialists of Contracting organizations involved in the areas of highway construction: Todini Costruzioni Generali S. p. a., JSC "SPIK accord".

24 May 2019 in the village of Zhamansor, Kyzylkoginsky district of Atyrau region for Contractors: Shanghai Construction Group Co., Ltd. JSC "SPIK chord"/ LLP "AK Zhol Kurylys", ANT Insaat Maden Sanayi A. S.

The participants of the training were specialists in environmental protection, social protective measures, specialists in ensuring road safety standards, specialists in safety, health and safety, specialists in personnel accounting.

The training covered the following topics: standards of activity in the field of environmental protection, standards, requirements and documents on road safety, safety.

Upon completion of the training, practical work was carried out to identify compliance with performance standards, approaches to monitoring and inspection work at the site.

As a result of the training and the practical part of the participants exchanged best practices in ensuring safety at the site.

Training organizer: DONGSUNG ENGINEERING CJ., LTD / ZS ENGINEERING LLP

Coaches: Specialist in Protective Measures, Imbarova Sarah
Road Safety Specialist, Temirbek Zhenisgul

Photos from sites



Contractor's office Lot 4. During the consultation on the development and packaging of the EMP



27.03.2019 Public consultation of the Contractor with the residents of p. Saghyz in the library of the House of culture start work on the complaints Mechanism



Lot 7 “Dossor” ecologist holds a lecture on segregation of waste for workers



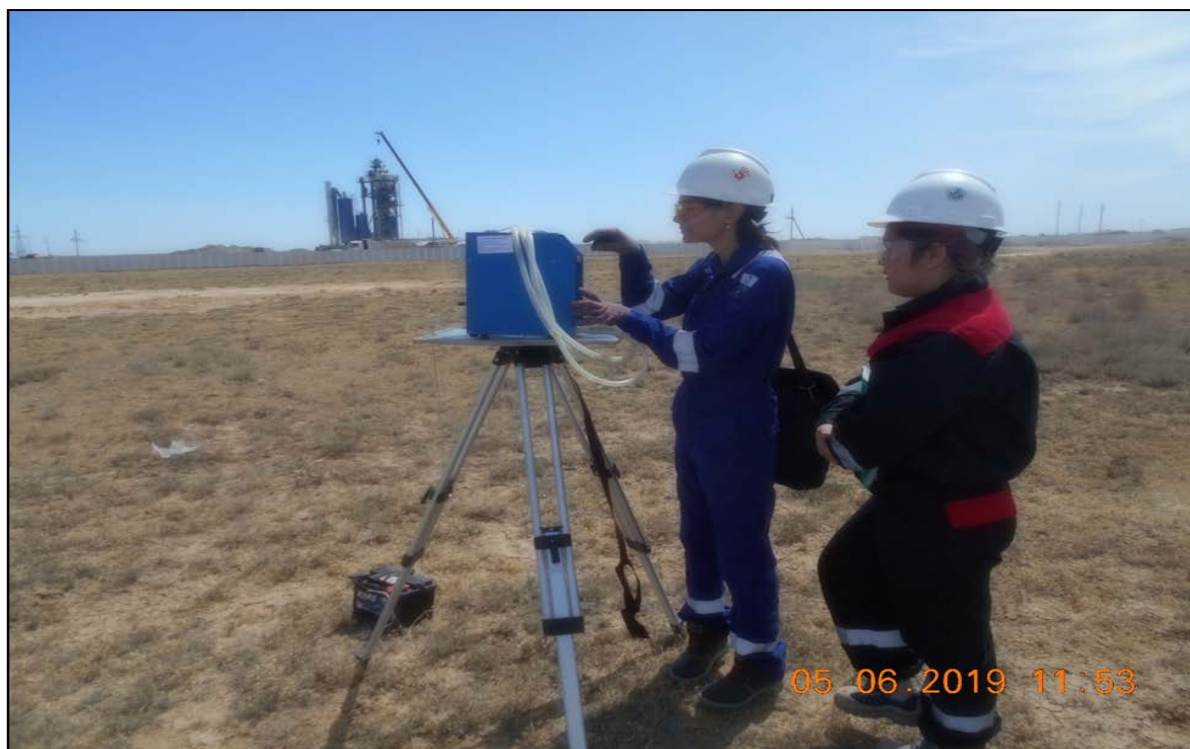
Training on waste segregation for engineers lot 7



CSC training for specialists contractors of Lot 4, Lot 5, Lot 6 and Lot 7



Laying the top layer on Km 497 - Lot 7



Measurements of air pollution near the Dossor village - Lot 7



**During the visit of the Chairman of the CRF Pshembayev M. - presentation of project progress
on Lot 5 .**



Zhamansor - Lot 6. During the training session of the safety on the project



Zhamansor. Lot 5. MSW storage area



Lot 6 - Environmental training for workers in the Zhamansor town on waste segregation



Training of staff on household services and waste management - Lot 6. Zhamansor



**Lot 6 - Zhamansor camp. Environmental specialist is providing lecture dedicated to the
Internation Day on Nature protection**

Application No. 7

Environmental monitoring checklist

Site review checklist		
Date of site visit: 19.03.2019 Time: 10:00	Representatives Of Engineer: Specialist for environmental protection Imbarova S.E. Contractor Representatives: Gulzhanat - ecologist	Ref. № Engineer----- Ref. № Contractor
Weather conditions: clear+38 Co, southeastern wind 5 m / s.		
Work currently being performed:	milling of existing coating layers on the territory of Lot 7, compaction of soil, laying of asphalt concrete pavement, construction of artificial structures	
The problems associated with the environment	possible cause	Proposed measures to reduce the risk
Increased dustiness on the roads	Hot weather conditions and the peculiarity of the soil cover, it is also possible insufficient irrigation of roads	Increase the number of water carriers, and increase irrigation near settlements.
Poor quality of bypass roads	Lack of a working party on the organization of bypass roads, or low control by the Contractor	Increase the number of water carriers, and increase irrigation near settlements.
Environmental Audit conducted by: Imbarova S.E.		Contractor Representative: Gulzhanat Zhantokova

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
Contractor's Base Camp						
1	Septic tanks are installed and cleaned in accordance with approved procedures	✓				
2	All wastewater is sent to septic tanks or service water tanks	✓		✓		
3	All the dangerous liquids stored in a prescribed place on an impermeable base with effluent collection	✓		✓		The concreted special is organized. Platforms, fences are installed.
4	Solid hazardous materials are stored in a safe place in the work areas	✓		✓		The concreted special is organized. sites installed fencing for storage of hazardous materials in

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
						accordance with the requirements.
5	Drains accumulate in the drainage system and are disposed of by the Contractor	✓		✓		
6	All vehicles entering and leaving the town are subject to control	✓		✓		
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	✓		✓		The contractor participates in meetings in Dossor and Makat and informs the administration of Akimat and the population about the stages of construction works
8	Open containers for storage of materials are covered with canopies	✓		✓		Containers intended for waste oil, located on the territory of construction sites are collected in closed containers for subsequent disposal
9	Open burning is prohibited	✓		✓		Not observed at the site and in the camp
10	Fire fighting equipment <ul style="list-style-type: none"> ▪ A bucket of sand and shovel ▪ Foam extinguisher ▪ Protective coating in the dining room 	✓		✓		
11	Access of other people to the town is prohibited by the installation of fencing and organization of security	✓		✓		At the entrance to the town there is a guard, equipped with a checkpoint
12	All employees are provided with personal protective equipment (PPE)	✓		✓		
13	Smoking is prohibited except in Smoking rooms	✓		✓		There are designated smoking areas at the property
14	Relevant road signs and warning signs on the site and in hazardous areas	✓		✓		The terms of traffic safety are observed
15	Drinking water is provided to all employees from commercial and licensed sources.	✓		✓		
16	Workwear of all employees is washed on a daily basis		✓			Work clothes of employees are washed as necessary

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
17	All employees are provided with three meals a day	✓				Local residents are provided only with lunch because they do not work in shifts. Does not contradict the legislation of Kazakhstan on labor
18	Dining room with sanitary conditions in the camp	✓				
19	First-aid posts and first-aid kit in the camp and in the working areas	✓		✓		First aid kits are replenished as needed. The journal of registration of requests for medical care is kept
20	Health of all employees is under control of the doctor of the town, and the corresponding services are provided, monthly medical examinations are also carried out	✓		✓		The medical center conducts daily pre-shift health monitoring and keeps a journal of daily medical examination (Alcotest, blood pressure, etc.).
21	The whole area is cleared, there is no excess waste, except for designated areas for waste disposal	✓		✓		
22	Providing a place to stay in the town	✓				Recreation areas and restrooms are organized
23	Child labor (below 15 years)		✓			Was not observed
Production site						
1	Liquid waste from the asphalt plant is stored in the installed tank, and they are exported by specialized suction equipment	✓		✓		
2	Solid waste from the asphalt plant is stored at the designated location and disposed of in accordance with approved procedures	✓		✓		
3	The area of the plant is engraved for the purpose of reducing dust	✓		✓		
4	The area of the plant is watered to reduce dust	✓		✓		According to the schedule of dust suppression and weather conditions. On windy days, the increased frequency of dust suppression.
5	The plant cannot discharge wastewater into any watercourse;	✓		✓		

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
	impervious concrete pools will be built to receive such water					
6	All workers of asphalt, concrete plant and crusher are provided with protective masks	✓		✓		
7	All workers of asphalt and concrete plant use protective masks	✓		✓		
8	Sands and fractions for concrete and asphalt are stored in a wet and covered place	✓		✓		
9	In Asphalt Plant, there are fire-fighting equipment	✓		✓		
10	Plant or equipment causing high levels of vibration are built properly, maintained and managed accordingly	✓		✓		
GAS STATION						
1	Refueling will be strictly controlled and allowed only at the gas station and workshop	✓		✓		
2	Space for storage tanks of fuel protected, and they are impermeable, cover tank closed		✓	✓		No fencing, no warning signs installed
3	Gas station equipped with fire-fighting equipment to be checked weekly	✓		✓		Continuous monitoring of the duration of the fire extinguisher and logging of replacement
4	The gas station has warning signs		✓		✓	
5	The gas station is equipped with a special wastebasket	✓				
Contractor's workshop and car wash						
1	Liquid hazardous materials are stored in the workshop location	✓		✓		The concreted specialized sites for storage of hazardous substances are organized on sites, protections are established.
2	Solid hazardous materials are stored in the installed place in the workshop	✓		✓		
3	There are special containers for collection of waste oil products and hydraulic fluids	✓		✓		

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
4	The waste oil 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		✓	✓		
5	The workshop is equipped with a drainage system	✓				
6	Each transport is inspected and maintained on an ongoing basis	✓		✓		Усилить ежедневный контроль спецтехники
7	All construction equipment complies with European Standards and is equipped with modern noise suppression equipment		✓	✓		
8	The noise suppression equipment of all equipment is checked and maintained in accordance with the approved procedures	✓		✓		
9	All workshop workers are provided with welding equipment and personal protective equipment	✓		✓		
10	All process water is collected in the concreted tank and the tank is cleaned in accordance with the approved procedures		✓	✓		
The Project Road						
1	All the roads targeted for construction work watered with the water truck	✓		✓		Increase the intensity of irrigation and the number of water carriers, during dry weather and special control areas near settlements
2	On the project road inappropriate places there are flags for the passage of cattle, sheep and other animals		✓		✓	
3	Sections of culverts and bridges, equipped with safety tapes and twisting signs	✓				
4	Fencing and access control services are installed at all workplaces where it is necessary		✓		✓	
5	Storage of waste of any type, as well as Parking of cars or vehicles is not allowed at a distance of 100 m from	✓		✓		

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
	any flow (including drainage or irrigation facilities)					
6	Work areas and hazardous areas are equipped with all relevant road signs and warning signs	✓		✓		
7	Construction machines and plants are properly maintained to reduce gas emissions	✓		✓		Усилить контроль за спецтехникой
8	Measures to combat noise in special facilities	✓		✓		
Borrow Pits						
1	Quarries and quarries are provided with temporary drainage	✓		✓		
2	200 m from the nearest settlements, all construction work stopped from 22: 00 to 6: 00 a.m.	✓		✓		There are no settlements in the immediate vicinity
3	Stack does not exceed 3 m in height	✓		✓		
4	All open-body vehicles are used for the transport of materials with possible dust formation, designed for these purposes with well-chosen folding bodies	✓		✓		
5	During the construction works the volume of noise is limited according to national standards	✓		✓		
6	Materials with possible dust formation do not load exceeding the level of folding bodies and close with a clean tarpaulin	✓		✓		Operators and accountants monitor the level of soil loading
7	All vehicles, production equipment and devices comply with Euro exhaust emission standards		✓	✓		
8	All temporarily acquired lands are restored		✓			Upon completion of construction works
9	All material residues and contaminated land are collected and disposed of in accordance with approved procedures		✓	✓		
10	During the delivery and processing of materials, water is watered	✓		✓		

№	Environmental Protection Measures	Completed		In process		Comments
		Yes	No	Yes	No	
11	Any direct sites damaged as a result of a dump of soil, are restored to an original look	✓		✓		
12	The riverbanks are protected from the contractor's indoor materials or temporary stacks	✓				
13	The negative effects or disruption due to construction work is monitored, with an acceptable level in accordance with the standards	✓				
14	Access road to quarries, quarries, reserves of sites and traffic conditions are serviced according to the approved standards	✓		✓		
15	Dropping and draining water, avoiding flooding or causing damage to other works or services causing erosion	✓				
Flora and Fauna						
1	Trees and shrubs that are outside the construction site, but within the road reserve, are usually protected from damage					On the territory of the construction site there are no green spaces
2	None of the ancient trees were cut down during the construction works					On the territory of the construction site there are no age-old plantations
3	Cutting is not carried out without the prior permission of the relevant local authorities					No plantings
4	Trees and shrubs are cut down and removed only if they interfere with the necessary temporary or permanent work					No plantings
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)		✓			The construction of bridges does not affect the cultivation and harvesting, as they are located in remote places.

Environmental monitoring checklist

Site review checklist		
Date of site visit: 21.09.2018 Time: 14:00	Representatives Of Engineer: Specialist for environmental protection Imbarova S.E. Contractor Representatives: Gulzhanat Zhantokova - ecologist	Ref. № Engineer Ref. № Contractor
Weather Conditions: clear, +34 C ₀ , wind Southeast 7 m/s.		
Work currently in progress:	milling of existing coating layers in Lot 7, soil compaction, asphalt concrete laying	
The problems associated with the environment	possible cause	Proposed measures to reduce the risk
Increased dustiness on the roads	Hot weather conditions and the peculiarity of the soil cover, it is also possible insufficient irrigation of roads	Increase the number of water carriers, and increase irrigation near settlements.
Environmental Audit conducted: Imbarova S.E.		Contractor Representative: Gulzhanat Zhantokova

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
Contractor's Base Camp						
1	Septic tanks are installed and cleaned in accordance with approved procedures	✓				
2	All wastewater is sent to septic tanks or service water tanks	✓		✓		
3	All the dangerous liquids stored in a prescribed place on an impermeable base with effluent collection	✓		✓		The concreted special is organized. platforms, fences are installed.
4	Solid hazardous materials are stored in a safe place in the work areas	✓		✓		The concreted special is organized. sites, installed fencing for storage of hazardous materials in accordance with the requirements.

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
5	Drains accumulate in the drainage system and are disposed of by the Contractor	✓		✓		
6	All vehicles entering and leaving the town are subject to control	✓		✓		
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	✓		✓		The contractor participates in meetings in Dossor and Makat and informs the administration of akimat and the population about the stages of construction works
8	Open containers for storage of materials are covered with canopies	✓		✓		Containers intended for waste oil, located on the territory of construction sites are collected in closed containers for subsequent disposal
9	Open burning is prohibited	✓		✓		Not observed at the site and in the camp
10	Fire fighting equipment <ul style="list-style-type: none"> ▪ A bucket of sand and shovel ▪ Foam extinguisher ▪ Protective coating in the dining room 	✓		✓		
11	Access of other people to the town is prohibited by the installation of fencing and organization of security	✓		✓		At the entrance to the town there is a guard, equipped with a checkpoint
12	All employees are provided with personal protective equipment (PPE)	✓		✓		
13	Smoking is prohibited except in Smoking rooms	✓		✓		There are designated smoking areas at the property
14	Relevant road signs and warning signs on the site and in hazardous areas	✓		✓		The terms of traffic safety are observed
15	Drinking water is provided to all employees from commercial and licensed sources.	✓		✓		
16	Workwear of all employees is washed on a daily basis		✓			Work clothes of employees are washed as necessary
17	All employees are provided with three meals a day	✓				Local residents are provided only with lunch because they do not work

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
						in shifts. Does not contradict the legislation of Kazakhstan on labor
18	Dining room with sanitary conditions in the town	✓				
19	First-aid posts and first-aid kit in the town and in the working areas	✓		✓		First aid kits are replenished as needed. The journal of registration of requests for medical care is kept
20	Health of all employees is under control of the doctor of the town, and the corresponding services are provided, monthly medical examinations are also carried out	✓		✓		The medical center conducts daily pre-shift health monitoring and keeps a journal of daily medical examination (Alcotest, blood pressure, etc.).
21	The whole area is cleared, there is no excess waste, except for designated areas for waste disposal	✓		✓		On the territory of the office of the Engineer is not organized
22	Providing a place to stay in the town	✓				Recreation areas and restrooms are organized
23	Child labour (below 15 years)		✓			Was not observed
Production site						
1	Liquid waste from the asphalt plant is kept in the established tank and they emptied specialized suction equipment ≤MTTSTH≥ Lyman	✓		✓		
2	Solid waste from the asphalt plant is stored at the designated location and disposed of in accordance with approved procedures	✓		✓		
3	The area of the plant is engraved for the purpose of reducing dust	✓		✓		
4	The area of the plant is watered to reduce dust	✓		✓		According to the schedule of dust suppression and weather conditions. On windy days, the increased frequency of dust suppression.
5	The plant cannot discharge wastewater into any watercourse; impervious concrete pools will be built to receive such water	✓		✓		Constant monitoring by the contractor's ecologist

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
6	All workers of asphalt and concrete plant are provided with protective masks	✓		✓		Provided and used in the work
7	All workers of asphalt and concrete plant use protective masks	✓		✓		Provided and used in the work
8	Sands and fractions for concrete and asphalt are stored in a wet and covered place	✓		✓		
9	Asphalt Plant have fire-fighting equipment	✓		✓		На огнетушители имеется журнал учета огнетушителей
10	Plant or equipment causing high levels of vibration are built properly, maintained and managed accordingly	✓		✓		
GAS STATION						
1	Refueling will be strictly controlled and allowed only at the gas station and workshop	✓		✓		
2	Space for storage tanks of fuel protected, and they are impermeable, cover tank closed	✓		✓		There is a fence and installed warning signs
3	Gas station equipped with fire-fighting equipment to be checked weekly	✓		✓		
4	The gas station has warning signs		✓		✓	
5	The gas station is equipped with a special wastebasket	✓				
Contractor's workshop and car wash						
1	Liquid hazardous materials are stored in the workshop location	✓		✓		The concreted specialized sites for storage of hazardous substances are organized on sites, protections are established.
2	Solid hazardous materials are stored in the installed place in the workshop	✓		✓		
3	There are special containers for collection of waste oil products and hydraulic fluids	✓		✓		
4	The waste oil products are collected in a concreted canister with a volume of up to 110% and the canisters are		✓	✓		

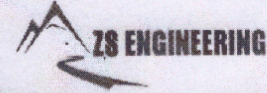
№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
	cleaned in accordance with the approved procedures					
5	The workshop is equipped with a drainage system	✓				
6	Each transport is inspected and maintained on an ongoing basis	✓		✓		Strengthen the daily supervision of special equipment
7	All construction equipment complies with European Standards and is equipped with modern noise suppression equipment		✓	✓		
8	The noise suppression equipment of all equipment is checked and maintained in accordance with the approved procedures	✓		✓		
9	All workshop workers are provided with welding equipment and personal protective equipment	✓		✓		
10	All process water is collected in the concreted tank and the tank is cleaned in accordance with the approved procedures		✓	✓		
The Project Road						
1	All the roads targeted for construction work watered with the water truck	✓		✓		Increase the intensity of irrigation and the number of water carriers, during dry weather and special control areas near settlements
2	On the project road appropriate places there are flags for the passage of cattle, sheep and other animals		✓		✓	
3	Sections of culverts and bridges, equipped with safety tapes and twisting signs	✓				
4	Fencing and access control services are installed at all workplaces where it is necessary		✓		✓	
5	Storage of waste of any type, as well as Parking of cars or vehicles is not allowed at a distance of 100 m from any flow (including drainage or irrigation facilities)	✓		✓		

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
6	Work areas and hazardous areas are equipped with all relevant road signs and warning signs	✓		✓		
7	Construction machines and plants are properly maintained to reduce gas emissions	✓		✓		To strengthen control over the machinery
8	Measures to combat noise in special facilities	✓		✓		
Borrow pits						
1	Borrow pits and quarries are provided with temporary drainage	✓		✓		
2	200 m from the nearest settlements, all construction work stopped from 22: 00 to 6: 00 a.m.	✓		✓		There are no settlements in the immediate vicinity
3	Stack does not exceed 3 m in height	✓		✓		
4	All open-body vehicles are used for the transport of materials with possible dust formation, designed for these purposes with well-chosen folding bodies	✓		✓		
5	During the construction works the volume of noise is limited according to national standards	✓		✓		
6	Materials with possible dust formation do not load exceeding the level of folding bodies and close with a clean tarpaulin	✓		✓		Operators and accountants monitor the level of soil loading
7	All vehicles, production equipment and devices comply with Euro exhaust emission standards		✓	✓		
8	All temporarily acquired lands are restored		✓			Upon completion of construction works
9	All material residues and contaminated land are collected and disposed of in accordance with approved procedures		✓	✓		
10	During the delivery and processing of materials, water is watered	✓		✓		
11	Any direct sites damaged as a result of a dump of soil, are restored to an original look	✓		✓		

№	Measures for the protection of the environment	Completed		In process		Comments
		Yes	No	Yes	No	
12	The riverbanks are protected from the contractor's indoor materials or temporary stacks	✓				
13	The negative effects or disruption due to construction work is monitored, with an acceptable level in accordance with the standards	✓				
14	Access road to quarries, quarries, reserves of sites and traffic conditions are serviced according to the approved standards	✓		✓		
15	Draining and draining water, avoiding flooding or causing damage to other works or services causing erosion	✓				
Flora and Fauna						
1	Trees and shrubs that are outside the construction site, but within the road reserve, are usually protected from damage					On the territory of the construction site, there are no green plants
2	None of the ancient trees were cut down during the construction works					On the territory of the construction site, there are no age-old plantations
3	Cutting is not carried out without the prior permission of the relevant local authorities					No plantings
4	Trees and shrubs are cut down and removed only if they interfere with the necessary temporary or permanent work					No plantings
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)		✓			The construction of bridges does not affect the cultivation and harvesting, as they are located in remote places.



DONGSUNG ENGINEERING CO., LTD
Atyrau Oblast,
E-mail: atyrau_kns2@mail.ru



Ref. No.DSE-AM-2-0853

Date: 19.02.2019

To: PMC "NC "KazAutoZhol" JSC
Attn: Mr. Krykbayev N.

Cc: Committee for Roads, MIID
Attn: Mr. Barmakov S.

Cc: RSE "AtyrauZholLaboratory"
Attn: Mr. Kenzheshev Y.

Cc: Shanghai Construction Group Co. Ltd. Lot 4
Attn: Mr. Tang Lujing

Cc: Shanghai Construction Group Co. Ltd. Lot 5
Attn: Mr. Fan Zhining

Project: CAREC Corridors 1 & 6 Connector Road (Aktobe - Makat) Reconstruction Project
Contract Nos. 004-ADB / CW-2018
005-ADB / CW-2018

Subject: Specialists of environment and social safeguard

Dear Sir,

The Engineer informs you that for the period from the Contracts Lot 4 and Lot 5 signing moment, from July 20, 2018 up to the present, the Contractor of these lots "Shanghai Construction Group Co. Ltd." did not mobilize environmental and social safeguard specialists. In November 2018, the Engineer approved two candidates for the position environmental specialist for Lot 4 and Lot 5, but these candidates subsequently recused themselves and left site. At present, the Engineer states that at Lot 4 and Lot 5 environmental and social safeguard specialists have not been mobilized and EMP and its attachment plans for environmental safeguard have not been developed.

Without EMP's approval, the Engineer cannot issue permit for construction works.

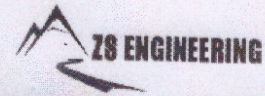
Yours sincerely,

Cha Joon Dae
Supervision Consultant Team Leader





DONGSUNG ENGINEERING CO., LTD
Atyrau Oblast,
E-mail: atyrau_kns2@mail.ru



Ref. No.DSE-AM-2-0856

Date: 19.02.2019

To: Shanghai Construction Group Co.Ltd.
Attn: Mr. Tang Lujing

Cc: Committee for Roads, MIID
Attn: Mr. Barmakov S.

Cc: RSE "AtyrauZholLaboratory"
Attn: Mr. Kenzheshev Y.

Cc: PMC "NC "KazAutoZhol" JSC
Attn: Mr. Krykbayev N.

Project: CAREC Corridors 1 & 6 Connector Road (Aktobe - Makat) Reconstruction Project
Contract No.004-ADB / CW-2018

Subject: Contractor's environmental specialist's reporting

Dear Sir,

From the beginning of the spring construction works, all environmental specialists of the Contractors are strongly advised to provide to the Engineer weekly reports for EMP implementation at their sites and for EMP's attachment plans implementation.

Weekly reports, which can also include checklists of environmental activities, should contain the following sections:

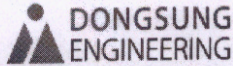
1. Overall project progress;
2. Environmental incidents, for example, spills of liquids, man-made problems and etc.
3. Progress of all environmental initiatives, for example, sensitive objects protection
4. Environmental monitoring records, both visual and instrumental
5. Conclusions and recommendations

Among these things, monthly reports should include use quantity of resources: water, electricity, gas, also removal and disposal of solid household waste, industrial waste, indicating the location of landfills.

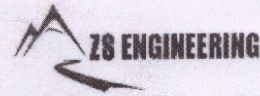
Yours sincerely,

Cha Joon Dae
Supervision Consultant Team Leader





DONGSUNG ENGINEERING CO., LTD
Atyrau Oblast,
E-mail: atyrau_kns2@mail.ru



Ref. **DSE-AM-2-0987**

Date: **11.04.2019**

To: Contractors Lot 4, Lot 5, Lot 6 and Lot 7
Attn: Mr. Tang Lujing
Mr. Fan Zhining
Mr. Zholdybayev N.
Mr. Tassimov A.

Cc: Committee for Roads, MIID
Attn: Mr. Barmakov S.

Cc: RSE "AtyrauZholLaboratory"
Attn: Mr. Kenzheshev Y.

Cc: PMC "NC "KazAutoZhol" JSC
Attn: Mr. Krykbayev N.

Project: CAREC Corridors 1 & 6 Connector Road (Aktobe - Makat) Reconstruction Project
Contracts **004, 005, 006-ADB/CW-2018, 007-ADB/CW-2017**

Subject: **Environment Management Activities Monitoring**

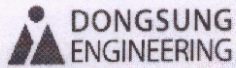
Dear Sir,

Reference is made to the following Contract Conditions and Technical Specifications:

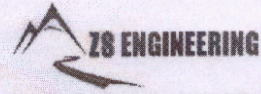
1. General Conditions of Contract (hereinafter "GCC")
 - ✧ Sub-Clauses 3.3 [Instructions of the Engineer]
 - ✧ Sub-Clauses 4.18 [Protection of the Environment].
2. Technical Specifications
 - ✧ Section 100, Clause 106 [Protection of the Environment]

In accordance with the Conditions and Specifications aforementioned, the Contractor shall implement the Environment Management Activities in order to protect the Environment during his activities of the construction. On these lines, the Contractor is instructed to conduct environment management activities as follows:

- A. To establish an environment management team led by Environmental Specialist
- B. To finalize and establish the Environment Management Plan
- C. To measure Pollution Levels:
 1. Measurement of atmospheric air pollution:
 - a. All vehicles of any type (including buses and special machinery) must undergo a technical inspection every year, (i) which includes an inspection of pollutant emissions and (ii) which must be carried out in accordance with legal regulations.
 - b. It is necessary to include these measurements in the environmental report.
 2. Measurement of noise and vibration pollution:
 - a. Levels of **noise** and **vibration** suffered by project personnel shall be measured and monitored on site.
 - b. Levels of **noise** and **vibration** suffered by drivers and operators of construction machinery shall be measured and monitored as well on site.
 - c. It is necessary to include these measurements as well in the environmental report.



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3. All measurements taken as aforementioned shall be included in reports of the laboratory and environmental specialists on sites.

As of 10.04.2019, the Contractor's Environmental Specialist on site has not submitted "monthly environmental monitoring report" as part of implementing the EMP activities. Previously, the Engineer informed you about the deadlines of report submission.

In conclusion, the Contractor is instructed:

- (i) to improve "environment monitoring activities" immediately,
- (ii) to measure pollution levels,
- (iii) to submit to Engineer's Office by 19.04.2019 the Environmental Monitoring Report including such measurements of Pollutions as guided above,
- (iv) that the Contractor's such monitoring activities shall be conducted continuously and monthly environment monitoring report shall be submitted strictly and monthly by the fifth day of every month.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Cha Joon Dae", written over a circular official stamp.



Cha Joon Dae,
Supervision Consultant Team Leader