

# Environmental Monitoring Report

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Project Number: 48424-002  
February 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 Investments and Development, Republic of Kazakhstan and the Asian Development Bank.

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# Semi-annual environmental monitoring report

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Project Loan No. 3416-KAZ  
Report period: July–December 2018

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

Funding by ASIAN DEVELOPMENT BANK

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For: Committee for Roads, Ministry of industry and infrastructural development, Republic of  
Kazakhstan

Approved by: PMC “NC “KazAutoZhol” JSC – Zeinullina A.A.

February 2019

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#### ABBREVIATIONS

RK – Republic of Kazakhstan

MID – Ministry of Investments and Development

MIID – Ministry of Industry and Infrastructural Development

CfR – Committee for Roads

KAZH – “National Company “KazAutoZhol” JSC

ADB – Asian Development Bank

CAREC – Central Asia Regional Economic Cooperation

PMC – Project Management Consultant

CSC – Construction Supervision Consultant

ECP – Environmental Control Program

EMnP – Environmental Monitoring Plan

EMP – Environmental Management Plan

SSEMP – Site Specific Environmental Management Plan

HSP – Health and Safety Plan

EP – Environmental Protection

MAC – Maximum Allowable Concentration

MAL – Maximum Allowable Level

SPZ – Sanitary Protection Zone

SR – State regulation

## **1 INTRODUCTION**

### **1.1 Preamble**

1. This report represents semi-annual environmental monitoring review by CAREC Corridors 1 and 6 Connector Road (Aktobe-Makat) Reconstruction Project (road section km 330-504, Lots 4-7). Report is the second semi-annual for this project.

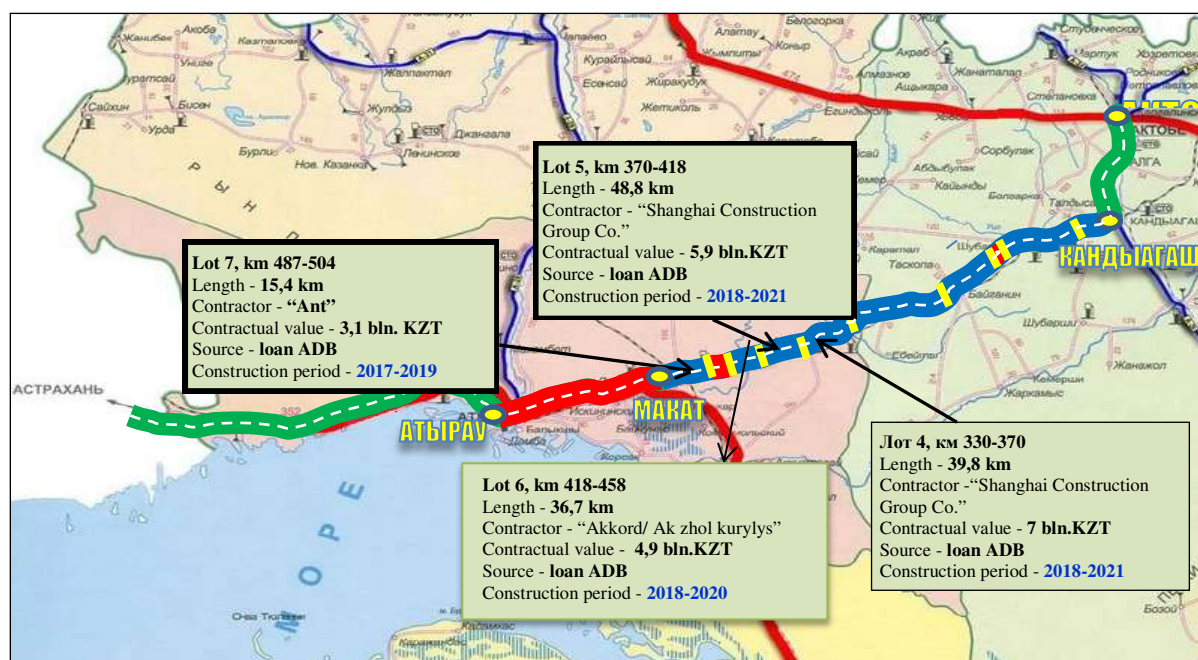
### **1.2 Key information**

2. Initially in the year 2017, the construction works were awarded to the Contractors on Lot-4 (km 330-370), Lot-5 (km 370-418) and Lot-6 (km 418-458) to "Tasyapi Insaat Taahut ve Ticaret A.S." and Lot-7 to "Ant Insaat Maden Sanayi A.S.". On 21 February 2018, 3 Contracts with "Tasyapi Insaat Taahut ve Ticaret A.S." were terminated due to the poor and slow progress of works on the site. In July 2018, three replacement contracts were awarded through re-tender process to Shanghai Construction Group (hereinafter "SCG") and <Akkord + Ak Zhol Kurylys> Joint Venture (hereinafter "AA"). Contracts on Lot-4 and Lot-5 were awarded to the SCG and Lot-6 was awarded to AA. These replacement Contractors have been carrying out works of mobilization and preparation on the site since August 2018.
3. The Contractor "Shanghai Construction Group Co." which is Contractor of Lot 4 (Contract 004-ADB/CW-2018) and Lot 5 (Contract 005-ADB/CW-2018) received advance payments in July 2018. The Contractor acquired "Shanghai Construction Group Co." Branch Office Registration certificate on 30.10.2018. Also, Contractor received license for road construction of relevant category on 24.12.2018. The Engineer officially issued "Notice to Commence Works" on 19.12.2018.
4. During the reporting period, regarding the Lot 4 (km 330-370) - on 24.12.2018 the Contractor has submitted "Base camp layout plan" for the Engineer's review. Previously chosen area by the Contractor for Base camp was rejected due to disagreement of neighboring village residents. In this case, the Contractor should choose other area for Base camp after public meeting with local people. By this reason, facilities have not been mobilized on site. Regarding the Lot 5 (km 370-418), planned area for base camp in Zhanterek village was not approved due to unavailability of legal documents for land.
5. The Contractor "Akkord - Ak zhol Kurylys" of Lot 6 (Contract 006-ADB/CW-2018) received an advance payment on 27.07.2018. Permission (talon) was also issued from the Department of State Architectural and Construction Control for the construction and installation works. "Order to Proceed" have been acquired from Employer and approved by Traffic Police. The Contractor continued mobilization works: construction of Base Camp, Production Base, Engineer's offices and Laboratory. The Engineer officially issued "Notice to Commence Works" on 01.10.2018. Land preparation for base camp construction has been completed on 3 hectares area at Km 435 of the Project road, near Zhamansor village. Territory was fenced and installation and construction of facilities, offices and accommodations for personnel and workers of the Contractor were on progress.
6. The Contractor JSC "ANT Insaat Maden Sanayi A.S." on Lot 7 (Km 487-504) proceeded and completed the work as of 31.12.2018 according to the Work program accepted by the Engineer. Currently, the Contractor is carrying out planned work for winter maintenance of reconstructed road for continuous and uninterrupted transit traffic. Asphalt concrete plant (ACP) DC-168 with capacity 160 ton/hour started production of bituminous mineral mixes from July 22 2018. Required material for asphalt concrete mix (crushed stone, bituminous, mineral powder) were procured. All necessary quantity of fractioned crushed stone was delivered on site. Necessary personnel for ACP was appointed and trained.

## 2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

### 2.1 Project description

7. Road "Aktobe - Atyrau - border of the Russian Federation to Astrakhan" is a republic importance road. The project section is a road section, connecting the northern and western regions of Kazakhstan with each other, with access to the Russian Federation, which requires increased requirements of transport and operational characteristics of the road.



Picture 1. Project road location

8. The project road category is II, according to the traffic intensity. Road construction is carried out on 4 Contracts, as indicated below.
9. **Lot 4: Km 330-370 (v. Sagiz):** This site includes the reconstruction of the category III road to category II road with a total length of 40 Km. Other parts of this section, the direction of the traffic flow are the same as the existing coverage with partial deviation from the embankment in areas of rectification and curvature designs. On this section the project provides construction of 2 bridges and 1 overpass. Overpass at Km 336 + 900 is in length 42.2 meters. The bridge across the river Nogaity at Km 338 + 900 has the length of 66.15 meters. The bridge across the river Sagiz at Km 342 + 300 has the length of 105.3 meters. Here in this area the construction of culverts in the number of 14 pcs of different diameters, 6 cattle crossings and 2 rest areas are provided.
10. **Lot 5: Km 370-418 (v. Mukur - v. Zhanterek):** This site includes the reconstruction of the category III road to category II Road with a total length of 48.2 Km. Other parts of this section, the direction of the traffic flow are the same as the existing coverage with partial deviation from the embankment in areas of rectification and curvature designs. On this section the project provides construction of 1 bridge. The bridge across the river Mukur on Km 379+100 is in length 48.55 meters. And also in this area the construction of culverts is in the number of 12 of different diameters, 8 cattle crossings and 2 rest areas are provided.
11. **Lot 6: Km 418-458 (v. Zhamansor):** This site includes the reconstruction of the category III road to category II Road with a total length of 36.73 km. Other parts of this section, the direction of the traffic flow are the same as the existing coverage with partial deviation from the embankment in areas of rectification and curvature designs. On this section the project provides construction of 1 bridge. The bridge across the river Sagiz at Km 429 + 000 has the

length of 84.25 meters. And also in this area the construction of culverts is in the number of 12 of different diameters, 1 cattle crossing and 2 rest areas are provided.

12. **Lot 7: Km 487-504 (v. Dossor):** length of the road section is 15.392 Km, category II, 2 lanes. This site includes the reconstruction of the category III road to category II Road. Other parts of this section, the direction of the traffic flow are the same as the existing coverage with partial deviation from the embankment in areas of rectification and curvature designs. And in this area the construction of culverts is in the number of 12 of different diameters and 2 cattle crossings are provided.

## 2.2 Agreements (contracts) for project Implementation and management

13. CfR MID RK signed the Contract with "NC KazAutoZhol" JSC (KAZH) for Project management consulting services in accordance with requirement specifications acceptable for ADB and applicable within the framework of regulation of the Republic of Kazakhstan. KAZH is fully staffed during the Project implementation. The responsible specialist for environmental and social safeguard measures conducts site audits and inspections, cooperates with CSC social safeguard specialist in order to effectively manage the project in part of environmental plans implementation.
14. By decree of President of the Republic of Kazakhstan dated 26.12.2018 No. 806 "On measures on further improvement of state administration system of the Republic of Kazakhstan", in order to improve the efficiency of state administration system, the Ministry of Investment and Development of the Republic of Kazakhstan was reorganized by transforming it into the Ministry of Industry and Infrastructural Development of the Republic of Kazakhstan with transfer of functions and powers: to National Economy Ministry of the Republic of Kazakhstan in the sphere of state policy formation on investment attraction and the Ministry of Foreign Affairs of the Republic of Kazakhstan in the sphere of state policy implementation on investment attraction.
15. Regional representative of the Employer is RSE "Atyrauzhollaboratory". Main organizations list, which is included in the project and related to environmental protection measures (Environmental Safeguards), is given below in Table No.1.

**Table 1. Organization list and specialists' contact information, related to Environmental safeguards of the Project**

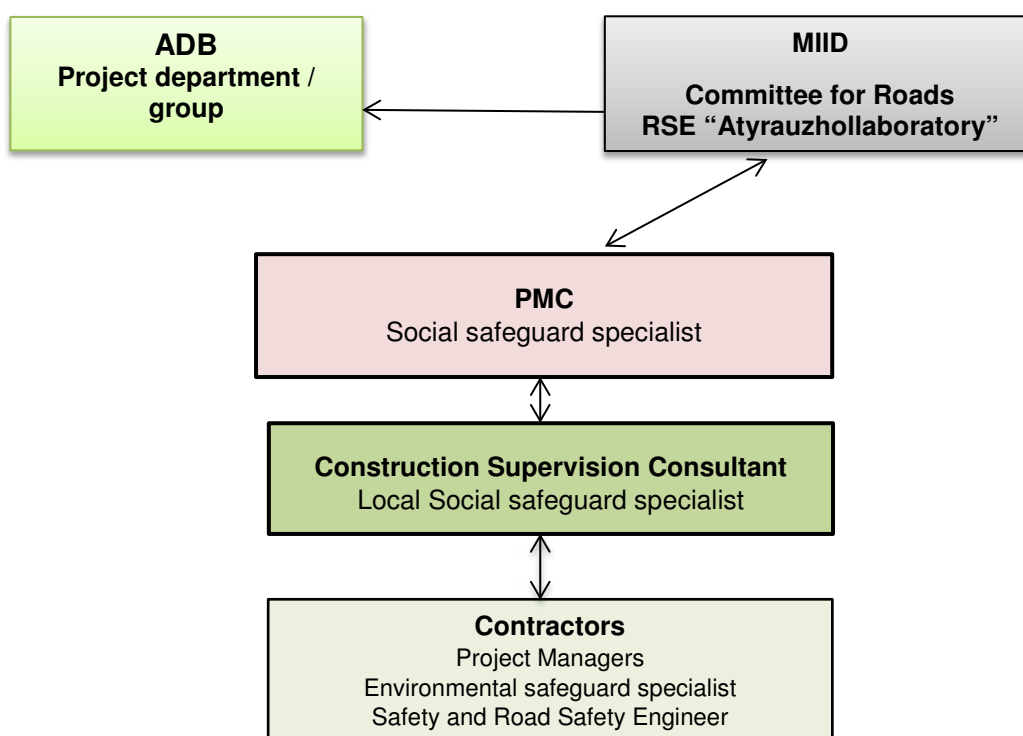
Organization name	Representative	Contact information
ADB Project department / group	Supervisor Nurlan Djenchurayev	
Committee for Roads	Ruslan Kussainov	Astana city 010000 / Transport Tower Kabanbay Batyr street 32/1 8 778 668 70 06 r.kusainov@mid.gov.kz
RSE "Atyrauzhollaboratory"	Kenzheshev Y. – director Zhanturin N. – coordinator Lot 4 and 5 Teleugaliyev M. – coordinator Lot 6 and 7	+7 (7122) 29 29 40
PMC "NC "KazAutoZhol" JSC	Zeinullina Aliya Social and environmental safeguard specialist	+ 7 701 982 66 57 a.zeinullina@kazautozhol.kz
Construction Supervision Consultant DONGSUNG ENGINEERING CO. LTD/ "ZS ENGINEERING " LLP	Imbarova Sara Environmental and social safeguard specialist	+ 7 771 754 13 55 + 7 701 362 36 12 aktobe_kns1@mail.ru



Lots 4 and 5 "Shanghai Construction Group Co."	No specialist	No
Lot 6 "Akkord / Ak zhol kurylys" Joint Venture	Gulzhanat Zhantokova	+7 777 298 88 44
Lot 7 "Ant Insaat Maden Sanayi A.S."	Gulzhanat Zhantokova	+7 777 298 88 44

**Table No.2. Information about the Contractors' Contracts**

Contractor's name	Contract No.	Road length (km)	Contract signing date	Project commencement and completion date
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." (China)	005-ADB/CW-2018	48.21	20.07.2018	19.12.2018 05.06.2021
Lot 6 "Akkord / Ak zhol kurylys" JV (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 road length:		140,14		



Picture 2. Organization chart of cooperation by the Project

## 2.3 Project activities during current reporting period

- Regarding Lots 4 and 5, Contractor is conducting mobilization works in part of personnel recruitment. EMP has been finalizing and Construction plans have been adjusted by the Engineer's instruction. No construction work during the reporting period.

17. Regarding Lot 6, Contractor carried out the following works and quantities:

- Received permission for environmental emission for objects category IV, No.KZ46VDD00102952 dated 29.10.2018;
- Received permission for environmental emission for objects category IV, No.KZ40VDD00105291 dated 26.11.2018. RMD construction at Makat village on Km 477+478;
- Conclusion No.KZ23VDC00075220 dated 22.11.2018 of state environmental expertise under the section "Environmental Impact Assessment" to the plan: "Mining operations for clay (soil) mining at 8 soil reserves";

18. During the reporting period, the following works were conducted on Lot 7 site:

- Bypass road construction completed. Also bypass road maintenance (dust control, installation of necessary road signs, rolling, levelling), winter road maintenance and safety control on progress;
- Completed all milling and scarifying works of old asphalt pavement with thickness 7-8cm. Main road pavement removal finished for 100 %;
- Cattle crossing construction completed at Km 492 and Km 499, also culverts at 10 sites;
- The Contractor utilized 15,720m<sup>3</sup> excavated soil from Borrow Pit No.1 and 22,420m<sup>3</sup> from Borrow Pit No.2 in November 2018. Thus the Contractor excavated total 38140m<sup>3</sup>.

**Table No.3 Construction work progress status for the reporting period Lot 7**

Contractor's name and site	Work activities	Unit of measurement	Total by the Contract	Done in 2018	Done in the I half year	Done in the II half year	% completion	Remain
Ant Lot 7 (km 487-504)	Cost	mln KZT	3 177,20	2 347,17	914,32	1 432,9	73,88	830,03
	Binder course	km	15,39	14,19	-	14,19	92,20	1,20
	Base course	km	15,39	15,39	-	15,39	100,0	0,00
	Lower base course	km	15,39	15,39	2,53	12,86	100,0	0,00
	Sub-base	km	15,39	15,39	4,16	11,23	100,0	0,00
	Roadbed construction	thousand m <sup>3</sup>	437,89	437,89	194,76	243,13	100,0	0,00
	Culvert construction	unit	14	14	4	10	100,0	0,00
	Total work progress quantity	%	100,00	73,8	28,78	45,10	73,88	26,2

## 2.4 Description of any Project Design change

19. During the reporting period, construction works did not start on the sites of Lots 4, 5 and 6. There was no design changes for Lot 7. All EMP works were on progress according to prepared SSEMP based on environmental impact assessment given in Project EIA.

## 2.5 Description of any changes in approved Construction Methods

20. During the reporting period, there were no significant changes in construction methods. All works were carried out according to Work Plans. There are some delays from planned works on Lots 4, 5 and 6 sites. But the Contractor's management and CSC Engineers are taking measures to reduce delays from Work plans.

21. Changes on Lot 7: Replacement of asphaltic base course pavement from hot black crushed stone size 5-40 mm to hot highly porous asphalt concrete brand II, because replacement design has a modulus of elasticity twice stronger than hot black crushed stone. Also, hot black crushed stone laying does not provide necessary adhesion and evenness, and laying of hot highly porous asphalt concrete brand II gives a high compaction coefficient and good grip during construction on site, which improves pavement quality and operation time of road structure.
22. Also, there was another change on this Lot, during construction process of an additional layer of gravel and sand mix due to deficiency of C2 mix, it became necessary to use C10 mix, laid on bypass road, for construction of additional base layer.

### 3 ENVIRONMENTAL ACTIVITY

#### 3.1 General description of Environmental activity (environmental safeguard measures)

23. Environment Management Plans of the Contractor “Shanghai Construction Group Co. Ltd.” Lots 4 and 5 are in development stage during preparation of this report. Engineer reviewed “Shanghai Construction Group Co. Ltd.” EMP was submitted on 11.11.2018. On 21.11.2018 Engineer issued written remarks regarding requirements for development of EMP and its attachment plans, and recommended to speed up environmental and social safeguard specialist mobilization. Final version of EMP has not been submitted, which is in process.
24. Health and Safety Plan, Program and Action Plan for prevention of workers and project adjacent to public from HIV/AIDS, STI/STD were not submitted for Engineer’s review.
25. The Contractor Lot 6 submitted list and CVs of specialists on 13.11.2018 for Engineer’s review. The Engineer approved proposed list of specialists. EMP was submitted on 16.11.2018. The Engineer issued written recommendations to EMP and its attachment plans on 21.11.2018. The Contractor submitted revised EMP on 21.11.2018. But, not all items have been changed per Engineer’s remarks. The last version of EMP is being prepared.
26. The Contractor submitted documents to Department of Natural Resources and Environmental Control of Atyrau region for review, included Section “Environment impact assessment” for the plan “Mining operations for clay (soil) mining at 8 borrow pits for CAREC Corridors 1 & 6 Connector Road (Aktobe - Makat) Reconstruction Project (section km 418-458) in Atyrau region, Republic of Kazakhstan”. Announcement was published in “Pricaspiskaya Communa” magazine by the Contractor about minutes of public hearing held on 6.11.2018. But the Engineer did not attend at this hearing because the Contractor had not informed the date and venue.
27. Regarding Lot 7, during the reporting period, according to the previously approved EMP, industrial environmental control was carried out in accordance with the requirements of the General Conditions of Contract (GCC) and results were submitted in September and October reports. EMP results are presented in detail in the relevant chapter of this report. During the reporting period, EMP and its attachment plans have not been adjusted, as earlier developed EMP meets all requirements and construction results had no other negative environmental impact as to how it was previously planned and assessed as possible risks in EIA.
28. During the reporting period environmental specialist of Lot 7 conducted some inspections to monitor and evaluate implementation of EMP activities, to analyze potential risks in the project environmental safety.

#### 3.2. Site audit

**Table 4. Site inspection information**

Visit date	Auditor’s name	Audit’s purpose	Summary of visit conclusion
9.08.2018	Imbarova Sara	Monitoring of Lot 7 EMP activities	At plant territory - not found out non-compliance.  At base camp - eliminated remarks regarding preparation of a place as temporary storage for solid household wastes (SHW).

			At construction site - not found out environmental non-compliance.
15.09.2018	Mission's list is attached	Inspection of environmental and social safeguard measures	Visit and site inspection report is attached hereto. (please refer to the Attachment)
20.11.2018	Imbarova Sara CSC	EMP monitoring	Not found out EMP non-compliance. <ul style="list-style-type: none"> <li>♦ The Consultant has earlier given verbal instructions to eliminate non-compliance</li> <li>♦ Regarding base camp improvement and temporary storage place for SHW were taken care and completed.</li> </ul>

29. The Contractor Lot 7 constructed 2 cattle crossings: at km 492 and at km 499 for passage of animals and possible agricultural machineries in the future. During monitoring migration of any kind of animals not found out at this site. Also no wild animals at this territory.
30. Environmental specialist Lot 7 during the reporting period demonstrated sufficient diligence in keeping and complying measures for the project environmental and social safety and external environment. All verbal instructions for eliminating inconsistencies eliminated by the environmental specialist Lot 7. All inconsistencies in this lot were non-significant impacts. It confirms diligence and professionalism of the Contractor's environmental specialist.
31. When CSC Engineer had visited sites, she saw that environmental specialist Lot 7 conducts her work, keeps records, and consults managers and workers about environmental and social safety issues. In the previous period, environmental specialist of this lot did not provide her monthly reports on EMP implementation, limited with submission of EMnP report. Environmental specialist included information about environmental safeguard and EMP implementation in a separate section with indicating all measures taken during the reporting period to the Contractor's monthly report from November.

### 3.3. Tracking of issues (Based on non-conformance notice)

32. Environment Management Plans of the Contractor "Shanghai Construction Group Co. Ltd." Lots 4 and 5 are in development stage during preparation of this report. Engineer reviewed of "Shanghai Construction Group Co. Ltd." EMP submitted on 11.11.2018. On 21.11.2018 Engineer issued written remarks regarding requirements for development of EMP and its attachment plans, and recommended to speed up environmental and social safeguard specialist mobilization. Final version of EMP and candidates for these positions have not been submitted.
33. As key specialists for safeguard measures were not mobilized at Lot 4 and Lot 5, the Contractor did not prepare and submit for Engineer's review the EMP, Health and Safety Plan and Program and Action Plan for prevention of workers and project adjacent to public from HIV/AIDS, STI/STD. They are main and important documents required until Contractor's mobilization at construction sites.
34. The Contractor Lot 6 submitted EMP on 16.11.2018. Environmental specialist of this Lot, approved by the Engineer, in help mode is completing final version of EMP and its attachment plans, together with Health and Safety plan.
35. No environmental non-compliances revealed for the Lot 7 construction site and the activities pursuant to the EMP have been in process.

36. Grievance mechanism was not established yet for the Lot 4 and Lot 5. Also, safeguard specialists were not mobilized at these Lots. According to register book for appeals and complaints of Lot 7, during the reporting period no any appeals and complaints regarding non-compliance with environmental safeguards from workers were recorded. From the beginning of Project commencement, no any complaint or appeal was registered.

### **3.4. Trends (general directions)**

37. During the reporting period, site monitoring, construction facilities audits, no any complaints about failure to meet environmental measures at Lot 6 and Lot 7 were recorded. There are serious issues with implementation of safeguards requirements on Lot 4 and 5. The Contractors of these Lots ignore contractual obligations dealing with development and submission for approval of SSEMPs with relevant annexes.

### **3.5. Unforeseen environmental impact or risks**

38. During the reporting period, no unforeseen environmental impacts have been identified. On Lot 4 and Lot 5, no such impacts identified, since construction works have not begun. Construction waste disposal was carried out according to work plans, with the provision of safeguard measures. All emissions to atmospheric air were within the permissible limit ~~tolerance~~. Instrumental measurements showed no excess of acceptable norms. Environmental specialist of Lot 6 and Lot 7 ensured constant monitoring and ensured an effective management system for environmental management plan.

#### 4. ENVIRONMENTAL MONITORING RESULTS

39. During monitoring of environmental measures, CSC environmental specialist at the short work period (6 months for whole project period) organized all work by following principle: field works were done during site visit and review documentation was done on-line. Communication between CSC environmental specialist and Contractors environmental specialists was kept on and allowed to exchange information and data.
40. Control and management focused on the following activities:
- ✧ supervision on site: visit with Contractors environmental specialists and joint work audit;
  - ✧ work photo records: with indicated photo taken date and time;
  - ✧ interviewing people on site: questions about impacts to workers, to environment, health and safety issues, also safety during work process;
  - ✧ meeting and consultation about issues and identified non-compliances,
  - ✧ document checking: result sheets of instrumental measures, reviewing environmental specialists' reports: monthly and semi-annual;
  - ✧ checking legal documents: permissions and all legal documents, related to environmental aspects.
41. To evaluate the actual (existing) state of the environment at the production facilities by the certified laboratory of the RSE "National Center of Expertise" of the Committee for Public Health Protection of the Ministry of Health of the Republic of Kazakhstan in Atyrau region. The following regulatory documents, measurement procedures and test methods were used:
- ST RK 51592-2003 Water. Sampling general requirements;
  - GOST 31319-2006 (EN-14253:2003) Vibration. Measurement and evaluation of human exposure to whole-body vibration;
  - GOST 26449.1-85 Stationary distillation desalting units. Methods of saline water chemical analysis;
  - ST RK ISO 7890-3-2006 Water quality. Determination of nitrate. Part 3. Spectrometric method with the use of sulphosalicylic acid;
  - ST RK 1957-2010 Environment protection. Atmosphere. Method for determination inorganic dust;
  - ST RK 2036-2010 Environment protection. Emissions. Air pollution control manual;
  - ST RK 2.297-2014 Methods of measurement mass concentration and determination of mass emissions of pollutants into the waste gases from fuel burned gas analyzers plants of different types;
  - GOST 17.2.4.06-90 Nature protection. Atmosphere. Methods for determination of velocity and flowrate of gas-and-dust streams from stationary sources of pollution;
  - GOST 17.2.3.01-86 Nature protection. Atmosphere. Air quality control regulations for populated areas;
  - GOST 17.2.4.08-90 Environment protection. Atmosphere. Methods of determination of humidity of gas-and-dust streams from stationary sources of pollution;
  - GOST 17.2.4.07-90 Environment protection. Atmosphere. Methods of determination of pressure and temperature of gas-and-dust streams from stationary sources of pollution;
  - GOST 12.1.036-81 Occupational safety standards system. Noise. Admissible levels of noise in houses and public buildings;
  - GOST 16372-93 Rotating electric machines. Limiting values of noise levels;
  - GOST 27436-87 External noise of motor vehicles. Permissible levels and methods of measurement;
  - GOST 31333-2006 (ISO 7188:1994) Noise of machines. Measurement of noise emitted by passenger cars under conditions representative of urban driving;

- GOST 12.1.050.-86 Occupational safety standards system. Methods of noise measurement at work-places;
- GOST 12071-2014 Soils. Sampling, packing, transportation and keeping of samples;
- GOST 28168-89 Soils. Sampling;
- GOST 26423-85 Soils. Methods for determination of specific electric conductivity, pH and solid residue of water extract;
- GOST 28268-89 Soils. Methods of determination of moisture, maximum hygroscopic moisture and moisture of steady plant fading;
- GOST 5180-84 Soils. Laboratory methods for determination of physical characteristics;
- GOST 26426-85 Soils. Methods for determination of sulphate ion in water extract;
- GOST 26424-85 Soils. Method for determination of carbonate and bicarbonate ions in water extract;
- GOST 26428-85 Soils. Methods for determination of calcium and magnesium in water extract;
- GOST 26488-85 Soils. Determination of nitrates by CINA method;
- GOST 26425-85 Soils. Methods for determination of chloride ion in water extract;
- Hygienic standard (HS) order No. 155 dated 27.02.2015 "Sanitary and epidemiological requirements for ensuring radiation safety";
- HS order No. 168 dated 28.02.2015 Hygienic standards for atmospheric air in urban and rural settlements;
- HS order No. 169 dated 28.02.2015 Hygienic standards for physical factors that affect people;
- HS order No. 452 dated 25.06.2015 Hygienic standards for the environment safety (soil);
- MVI-4215-002-56591409-2009 FR.1.31.2009.06144 MVI-4215-002-56591409-2009 FR.1.31.2009.06144 Methods for measurement mass concentration of harmful substances in the atmospheric air by the gas analyzer GANK-4;
- MVI-4215-006-56591409-2009 FR.1.31.2010.06966 Methods for measurement mass concentration of dust in the atmospheric air by the gas analyzer GANK-4;
- MVI-4215-005-56591409-2009 FR.1.31.2010.06965 Methods for measurement mass concentration of unsaturated and aromatic hydrocarbons, oxides and acetates of some organic substances in the atmospheric air by the gas analyser GANK

#### 4.1. General information of monitoring conducted during current period

42. During the reporting period, the Contractors of Lots 4, 5 and 6 have not conducted monitoring works of environmental impact. Contractors were mobilizing on their construction sites. Lot 6 planned to complete mobilization on site in February, Lots 4 and 5 no information. Contractor is choosing land area. Key environmental and social specialists of Lots 4 and 5 were not mobilized. This kind of work is on process, but so slow.

**Table 5: Environmental monitoring compliance on Lot 4 and 5**

No	Place	Problem issues	Recommended measures	Implementation / Conformity	Progress status
1	Mobilization of environmental specialists	Candidates' CVs have not been submitted for CSC's review	To contact with regional employment department	Major non-compliance. CSC sent written notice to speed up key personnel mobilization on site in October	In process



2	Construction site	EMP and its attachment plans have not been submitted for approval	To develop EMP and its attachments	Major non-compliance. 2 written notices about plans submission	Candidate recruitment for position of environmental specialist is in process
3	Base camp	Choosing area Approval of management plan and layout plan	To speed up choosing area and agreement development for temporary use or rental	In process	Not completed

43. The monitoring of project environmental impact for Lot 4 and 5, and compliance with environmental standards and requirements, was not possible to carry out because SSEMP not submitted. This kind of work will be conducted after approval of SSEMPs.
44. Environmental compliance monitoring results for the Lot 6 and Lot 7 is given in tables No.6 and No.7 respectively.

**Table 6: Environmental compliance monitoring Lot 6**

No	Place	Problem issues	Recommended measures	Implementation / Conformity	Progress status
1	Road section	Using safety tools (protective glasses, gloves, special clothes, helmet, safety shoes and etc.) by workers and Engineers	Availability of safety tools in labour camp and on construction site.	Safety tools are provided for workers and Engineers as necessary	In process
2	Base camp	Water supply	Water supply for drinking and domestic use, providing wash basin in shower unit, toilet, kitchen and canteen. Cross- check and uninterrupted supply of drinking water	Drinking water is bottled water, water for other domestic use is water from village's water system at Makat village.  Yearly water consumption, m3:  In 2019-2020 - domestic and drinking: 172 (0.63x273), technical - 1447 (5.3 x 273);  in 2021 - 55 and 412;	In construction process

				in 2022 - 29 and 218, respectively.  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.	
3		Sanitation and hygiene	Providing toilet bowls and rinsing water in shower units.  Transportation to septic tanks for processing and disposal	All containers for accommodation are provided with toilet bowls and rinsing water. Sewerage is merged into a septic tank, removed by the appointed organization	In process
4		Kitchen and canteen	Provision of appropriate ventilation, cranes and providing hygiene on food preparation and eating, food storage places	The Contractor's own canteen in progress	In construction process
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 yet to be recorded and confirmed	In process Base camp is under construction
6		SHW and waste	Putting the trash buckets and urgent modernization of the pits for waste disposal, cover and control on base camp territory.	Household wastewater and feces: are disposed by sewage truck to wastewater treatment facility of Makat Housing and utilities sector. Agreement concludes for this kind of service. Water discharge quantity: 172	Received conclusion of State Environmental Expertise No.: KZ23VDC0007 5220 dated 22.11.2018  Agreement for disposal is in process of choosing service provider.

				(55; 29)* 0,8 = 138 (44; 23) m3.	
7	Borrow pit / 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.: KZ23VDC0007 5220 dated 22.11.2018
8	Fire-fighting equipment in labour camp, in office	Fire-fighting must be in labour camp and in 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	In process
9	Vehicle and equipment traffic in base camp	Excessive dust pollution in camp territory and noise pollution of environment as a result of traffic in camp and on site.	Equipment, which meets environmental standards for noise should be used on construction site.	Parking for machinery is located far from office and accommodation.	In process
10	ACP	Giving PPE, medicinal and prophylactic food and milk. Dust control in territory and in storage	Compliance with safety standards and requirements, compliance with FIDIC, Contractual obligations	Document preparation for receive conclusion	In process. It is planned to receive on February-March 2019

**Table 7: Environmental compliance monitoring Lot 7**

No	Place	Problem issues	Recommended measures	Implementation / Conformity	Progress status
1	Road section	Using safety tools (protective glasses, gloves,	Availability of safety tools in labour camp	Safety tools are provided for workers and	Conducted

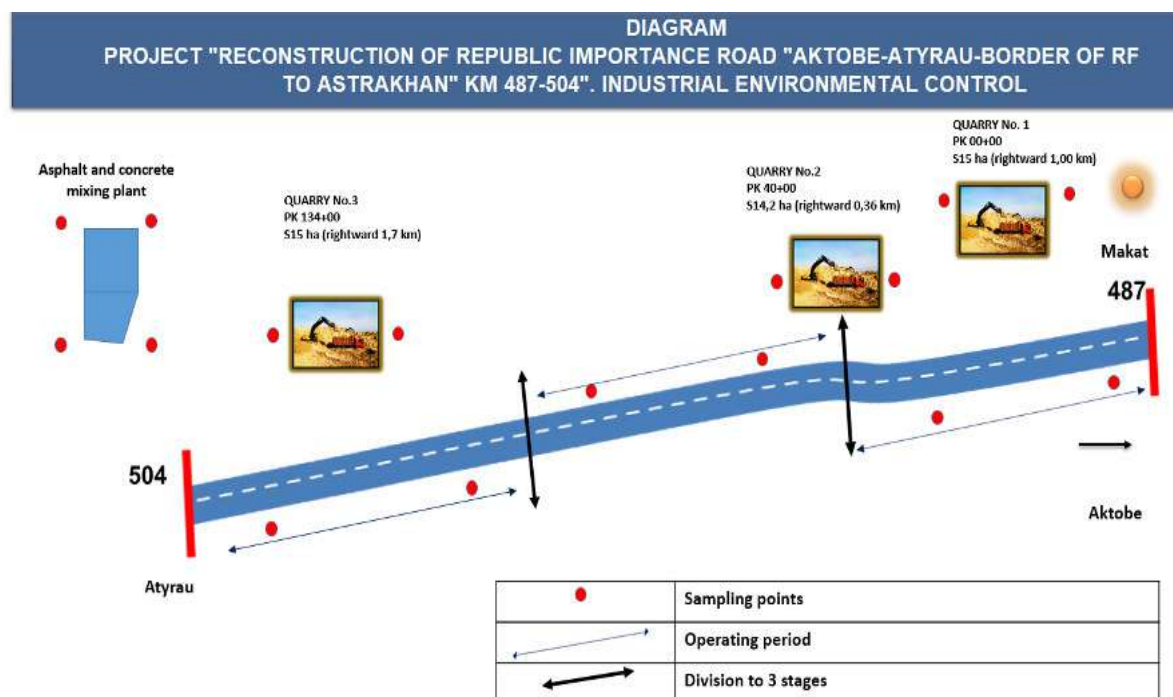
		special clothes, helmet, safety shoes and etc.) by workers / Engineers	and on construction site.	Engineers as necessary	
2	Labour camp	Water supply	Water supply for drinking and domestic use, providing wash basin in shower unit, toilet, kitchen and canteen. Cross- check and uninterrupted supply of drinking water	Things are available. Washbasins installed in all toilets, canteens, Water is taken from water intake source	Contractor conducted
3		Sanitation and hygiene	Providing toilet bowls and rinsing water in shower units. Transportation to septic tanks for processing and disposal	All containers for accommodation are provided with toilet bowls and rinsing water. Sewerage is merged into a septic tank, removed by the appointed organization	Conducted
4		Kitchen and canteen	Provision of appropriate ventilation, cranes and providing hygiene on food preparation and eating, food storage places	The Contractor's own canteen on progress	Canteen is built at base camp territory. Keep all norms and rules for eating and food storage
5		Drainage in base camp	Provision of drainage water diversion in camp territory. To avoid accumulation of water inside of camp.	There is not found out accumulation of used water in the camp territory.	Conducted
6		SHW and waste	Putting the trash buckets and urgent modernization of the pits for waste disposal, cover and control on base camp territory.	There is a trash bucket in each room, disposal by a special organization for removal and placement of SHW to a landfill	Conducted
7	Borrow pit / soil borrow pit territory	Material stockpiling in accordance with the RK environmental legislation	To take permission for soil excavation for borrow pits at km 488, km 492 and km	Conducted. Permissions from relevant organization have been received.	Conducted

			507		
8	Fire-fighting equipment in labour camp, in office	Fire-fighting must be in labour camp and in office.	To put firefighting 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	Conducted There is a book for record and fire extinguisher replacement
9	Vehicle and equipment traffic in base camp	Excessive dust pollution in camp territory and noise pollution of environment as a result of traffic in camp and on site.	Equipment, which meets environmental standards for noise should be used on construction site.	Parking for machinery is located far from office and accommodation.	Conducted
10	ACP	Giving PPE, medicinal and prophylactic food and milk. Dust control in territory and in storage	Compliance with safety standards and requirements, compliance with FIDIC, Contractual obligations	In process	Conducted and follow all time. The Contractor prepared and uses internal control system and assessment of safety condition of all project activities and also company.

45. The Contractor Lot 7 conducted initial monitoring at sampling points and measurement points approved by the CSC Engineer in July. Data of measurements and laboratory tests are given in the first semi-annual report and recorded as background.
46. In subsequent periods, the impact is recorded in Lot 7 environmental specialist's records and monitored by activities described in EMP's attachment plans. Since October environmental specialist of this Lot has been submitting her separately prepared environmental reports with implementation indicators of EMP measures and its attachment plans. In accordance with SSEMP and along with Environmental Monitoring Plan, the Contractor Lot 7 provided parameter measurements and observations of air and soil quality, noise and vibration level, social and cultural resources.

#### 4.1.1. Environmental measurements on Lot 7 site

47. Measurements of vibration and noise level, also atmospheric air pollution level carried out in accordance with approved measurement point's diagram. Diagram for measurement points of noise and vibration level, also measurement points of atmospheric air pollution level is given in the Picture 3 below.



Picture 3. Measurement point's diagram of noise and vibration, atmospheric air pollution

#### 4.1.1.1. Noise and vibration

48. According to the Guidelines of the International Finance Corporation "Environment, Health and Safety Guidelines", MAL of noise for construction areas is 85 dBa, and peak (instantaneous) noise level is not higher than 140 dBa, and for the residential area is 70 dBa. The national standard (Hygienic Standard No. 169 dated 28.02.2015) defines MAL 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 107-122 dB. The national standard was used for this report because it is more demanding for the meaning of MAL.
49. Vibration and noise level was measured by Atyrau regional RSE "National Center of Expertise" of the Committee for Social Health Protection of the Ministry of Health of the Republic of Kazakhstan. According to monitoring reports, measurements were taken at the same place with base lines: road construction site (beginning km 487, middle km 500 and end km 504), at the border of Sanitary Protection Zone of Asphalt plant km 510 (beginning, middle and end) and at each borrow pit (beginning, middle and end) Borrow pit No.1 km 487, borrow pit No.2 km 491 and borrow pit No.3 km 504.
50. According to the protocols for measuring levels of noise (Attachment No. 3.1) and vibration acceleration (Attachment 3.2), they are shown that none of the measurement points has not exceeded MAL for noise and Permissible equivalent corrected level for vibration acceleration. Laboratory data from the protocols for September and November attached to this report in Attachment No. 3.
51. According to noise measurement protocols (Attachment 3.1), the maximum allowable level of 80dBa (according to HS), on 21.09.2018 recorded within 71-79 dBa at the points of borrow pits No.1, No.2, No.3. Noise level measurements recorded within 71-79 dBa at the points of road construction, and at four points of the SPZ of base camp, where ACP is located, recorded within 48-71 dBa. The subsequent measurement made on

19.11.2018 recorded within 58-76 dBa at the borrow pits No.1 and No.2. Borrow pit No.3 not measured because there was not any work during this period on this borrow pit. The noise level in the SPZ at four points is fixed 48-71 dBa and at road construction sections is 58-78 dBa. All indicators for noise and vibration do not exceed MAL. Noise level in borrow pits are close to MAL, but take into account their far location from the settlements, prevention and reduction measures not done, but Lot 7 Contractor's health and safety specialists control an impact on employees, involved in this work areas. It is necessary to take into account the recommendations (general guidelines for environment, health and safety. 30.04.2007 IFC) on the use of protective measures: personal protective equipment, time protection for recording noise levels of more than 80 dBa.

52. According to vibration acceleration measurement protocols (Attachment 3.2), on the territory of the Contractor's laboratory, on 21.09.2018 the maximum level was recorded at the laboratory - 31 dB, and in the operator's room - 33 dB, and in the third quarter, on 19.11.2018, the maximum level at the laboratory was 30 dB, and in the operator's room - 32 dB, which testifies that the established permissible equivalent corrected level of vibration acceleration are not exceed 107-122 dB.
53. The Contractors organized their work taking into account the location of installation and traffic in order to reduce noise. No any settlements near base camp and production base. For site workers to protect from harmful long-term noise, emanating from construction machineries, organized short-time rest. In most cases, noise-related work was conducted during day time.

#### **4.1.1.2. Soil**

54. Soil pollution measurement. Production is not carried out on the enterprise territory for permanent waste placement, temporary storage of production and consumption wastes is carried out with keeping necessary requirements excluding impact on soil cover. Traffic of construction machineries will be 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 impact on land resources, the Contractor included a number of activities in the Environmental Management Plan of this project:
- compliance with the technological work cycle;
  - fuelling and replacing fuel and lubricating materials 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**

55. There are no water sources on the territory of the contractor. As sources of technical and drinking water, water is taken from water towers, which are located in village Dossor, Makat and are in service of PSE "Atyrau Su Arnasy". During construction works, water is used for household and industrial needs. Water control is not provided, because drinking and technical water supply is provided from a culvert, which is located in village Makat and is in service of PSE "Atyrau Su Arnasy". The quality of drinking water conforms to sanitary and epidemiological requirements.

#### **4.1.1.4. Atmospheric air quality**

56. Monitoring carried out at the points specified in the Contractor's SSEMP. According to submitted sampling reports and their results, during sampling were recorded atmospheric air, climatic parameters: wind speed, direction, barometric pressure, humidity, temperature. The measurements were carried out in September and November on the following indicators: inorganic dust, nitrogen dioxide, sulfur dioxide, carbon monoxide, formaldehyde, hydrocarbons C12-C19, hydrogen sulfide. In Attachment No.4 of this report are shown results of air pollution

measurements in the second half year in comparison with base line at Asphalt plant (km 504) at four points, according to measurement point's diagram on the Picture 3 (above).

57. In the second half year carbon monoxide at all four measurement points has a significant excess in comparison with measurements made before the commencement of construction works at these points in July, but these exceedances do not exceed MAC limits. Regarding other measurements of pollutants, MAC excess was not recorded. During measurement periods in September and November there was active period of construction works at this site, a large number of construction machinery was used, which undoubtedly affected to emission level of atmospheric air.

#### 4.2. Trends (general directions)

58. In the annual observations of Lot 7 found out a little increase of specific pollutants in the air in September-November. This is the period of active construction works. In general, the negative impact to the environment: atmospheric air, vibration and noise, health of project affected persons, also flora and fauna not marked.

#### 4.3. Summary of monitoring results

59. The expediency of carrying out additional monitoring measures is absent, since all instrumental measurements, observations and audits confirm the absence of a negative impact of construction works to the environment. Pollutants (atmospheric air, health of project affected persons, flora and fauna) do not exceed MAC. The measures taken by the Contractor Lot 7 to reduce the environmental impact are sufficient. The Contractor's activity has a permissible load to the environment.

#### 4.4. Use of material resources

##### 4.4.1. Current period

60. Resource consumption for the reporting period of Lot 6: an agreement for natural gas to be concluded with "KazTransGas Aimak" JSC. Technical terms and connection point prepared. After the agreement conclusion, gas pipeline construction and installation works are planned approximately in the second quarter of 2019.
61. Regarding to drinking water for Lot 6, bottled water deliver based on an agreement with Individual Enterprise "Sadykov".
62. Table No.8 below shows data about resources use of Lot 7.

**Table 8. Number of used resources for the second half year 2018 year\***

Sections Resources	Lot 7
Electric power, kW/h	6 766 652,69
Natural gas, thousand m3	183 034
Drinking water, m3	287 845
Water for technical use, m3	21 303,63

\* Data for Lots 4, 5 and 6 are absent.

##### 4.4.2. Cumulative use of resources

**Table 9. Cumulative use of resources for 2018**

Sections Resources	Lot 7
Electric power, kW/h	6 814 495,69
Natural gas, thousand m3	183 034
Drinking water, m3	287 845



Water for technical use, m3	21 303,63
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#### 4.5. Waste management

63. Waste management is organized by the Contractor Lot 7 according to developed EMP's attachment plans. The whole management process is based on two stages. The first stage consists the organization works to do places for temporary storage of solid household waste (SHW) and hazardous waste. The second stage includes the organization works of waste disposal process with the involvement of specialized companies. Places for temporary storage of SHW and hazardous waste are organized on Production Base territory located at Km 510. There are ACP, Contractor's laboratory, Contractor's and Engineer's office, the infrastructure of base camp on this base's territory. Waste from this territory is stored on a special organized place for temporary storage with subsequent disposal through the involvement of specialized companies. Removal of SHW and effluents is carried out by "WEST DALA" LLP, an agreement concluded on 29.03.2018 and by "Tazalyk - Kogal" LLP, an agreement concluded on 05.02.2018.

##### 4.5.1. Current period

64. During the reporting period for waste management the Contractor on Lot 7 followed written points of SSEMP in part of infrastructure management. SHW and construction waste are located at the specialized site of "Tazalyk Kogal" at Dossor village. These services are provided by the agreement conditions of specialized company "Tazalyk Kogal" LLP. Attachment No.6 presents the specialized landfill layout.

**Table No.10: Information about SHW disposal for the July-December 2018, Lot 7**

No.	Waste type	Unit of measurement	Waste classification	Number	Method/way for waste disposal
1	SHW	Tons	Not hazardous	4.24	Removal and disposal at landfill
2	Effluents	m <sup>3</sup>	Not classification	311	

##### 4.5.2. Cumulative waste generation

65. According to act of performed work for 3 quarter removed SHW:

- in July 2, 12 tons - "WEST DALA" LLP
- in July 3, 0 m3 - "Tazalyk Kogal" LLP
- in August SHW 12.0 m3 - "Tazalyk Kogal" LLP
- in September construction waste - 275 m3 - "Tazalyk Kogal" LLP

Totally for 3 quarter were removed 292 m<sup>3</sup> wastes.

For 4 quarter removed:

- in July 2, 12 tons - "WEST DALA" LLP
- in October SHW 3,0 m3 - "Tazalyk Kogal" LLP
- in November SHW 11,0 m3 - "Tazalyk Kogal" LLP
- in December SHW 5,0 m3 - "Tazalyk Kogal" LLP

Totally in 4 quarter 2019 were 19,0 m<sup>3</sup> of SHW were removed.

For the second half year 311,12 m<sup>3</sup> of SHW were removed.

Food waste removed by local workers to their domestic animals every day.

66. Based on the monitoring results of waste management activities, recommendations were given to the Contractors to include corrections in waste management plans. For the environmental specialist of Lot 7:
- To keep a log book for SHW removal: type, number, hazard type, location, disposal methods and add this kind of information to the Contractor's monthly report for CSC;
  - To organize explanatory works for the Contractor's workers regarding environmental safety issues at accommodations, construction work sites and near areas to the villages.

#### **4.6. Health and Safety**

##### **4.6.1. Public Health and Safety**

67. During the reporting period, the Contractors conducted activities in accordance with the approved Road safety management plans. Timely supervision and accompanying consulting by the Road Safety Engineer of CSC made to ensure safety to traffic passengers and Contractor's personnel. During the audit periods, found out that relevant work were conducted by the Contractor Lot 7, i.e. installation of safety signs, temporary road widening, pit repair works, preparation for the winter road maintenance works. Hazardous areas are marked with warning signs.

##### **4.6.2. Workers Health and Safety**

68. Workers health and safety is ensured at Lot 7 by plans. Medical facility is organized to ensure health on site. It is located at base camp territory of the Contractor in Dossor village. There are two certified medical workers. All workers every day in the morning before work are checked for a medical test of general health, which is then recorded in the log book. This procedure is carried out by the Contractor's all employees, since it is necessary to take a permit from the medical worker for work. Employees of the organization can also contact the medical facility at any time if they feel bad. The medical facility is equipped with all necessary medicines, according to the list for such facilities and medical supplies for the organization and provision of first aid. The Contractor prepared Health and Safety Program. It includes health care activities and preventive measures for non-proliferation of STI, STD, HIV / AIDS among workers and local public.
69. In case of emergencies on site, the Contractor concluded an agreement for the provision of emergency assistance with State Organization "Makat Central District Hospital". In accordance with the Order of National Economy Minister of the Republic of Kazakhstan dated June 6, 2016 No. 239 "About approval of Sanitary Rules" "Sanitary and epidemiological requirements for the implementation of production control" at residential places, eating places (canteen), lavatory (toilet) equipped with bactericidal irradiators - air disinfection equipment. Deratization and disinsection of accommodation and office of base camp are held once a quarter.
70. Also, in order to ensure health, the Contractor Lot 7 strictly comply with legal regulations regarding the provision of safety clothes, safety shoes and personal protective equipment. During 2018 year, the company's 150 workers were provided with summer safety clothes, safety shoes and personal protective equipment, such as: seasonal coat with trousers, seasonal safety shoes, safety vest, gloves, safety helmets, dust masks, safety glasses. Winter safety clothes and shoes were provided for 90 people.
71. In order to protect health and ensure safety, the Contractor Lot 7 organized study for their personnel through different trainings. These works are registered in the relevant regulatory documents. Introductory training started on February 12, 2018. All employees who are involved to work, studied introductory safety training. All records are recorded in log books of Road Safety, Health and Safety specialists, and checked by Engineering Service specialist. Trainings are organized every day at work places, which is also recorded in log book.

The list of log books, which the Contractor's specialists have:

- Registration book for introductory training;
- Registration book for trainings at work places;
- Log book for fire safety trainings;
- Accident registration book;
- Log book for Personal Protective Equipment provision;
- Log book testing and recharging of fire extinguishers;
- Registration book for medical test of drivers, who is going to start his work;
- Log book for medical test results of hired drivers;
- Registration book for employees, who seek medical attention;
- Log book for introductory road safety training;
- Registration book for road accidents;
- Log book for traffic offense;

Toolbox meetings for Safety and Road safety compliance are an integral part of work and daily practice.

72. There are totally 68 units temporary road signs installed at Lot 7 site such as: warning signs, prohibitory signs, informational-direction road signs, priority road signs. All temporary road signs installed in accordance with approved diagrams and ST RK 1412-2017, ST RK 2607-2015. Temporary road signs are light reflective and clean.

During the reporting period 3 incidents were registered. Detailed information on each incident is presented in table No.11 below.

**Table 11: Information about incidents at Lot 7 site**

No.	Date	Incident kind	Summary	Status
1	30.08.2018	Road accident	There was road accident with Toyota Camry by the driver Saparbekov T.T. 1970 year of birth at bypass road PK 130+00 (500 km) at 2:20 p.m. There was only one person – a driver in the car. The driver, having exceed the speed, failed to control the car and rolled over.	The driver provided first aid. According to this road accident, the driver Saparbekov T.T. had no objection to anyone and evacuated the car from accident place.
2	22.10.2018	Road accident	There was road accident with vehicle VAZ-21120 at bypass road at 11:00 a.m. There were 5 people in the car. The driver did not have a driver's license and insurance policy. According to available information, the driver exceed the speed, failed to control the car and due to it, the car rolled over. Two persons: driver and 1 passenger died.	Criminal case No.182352031000129 dated 13.11.2018 stopped due to the death of the suspect

3	21.11.2018	Road accident	There was road accident with two vehicles Lada-21705 and Lada-21705 at bypass road PK 94+00 (km 497+593) at 2:30 p.m. Due to it, two passengers died, one of them is a child.	Criminal case No.182352031000134 dated 23.11.2018 is under investigation.
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**Table No.12: Statistic of accidents and incidents on the project**

Name	Lot 7
Road accident	3
Accident	0
Loss of labour capacity	0
Downtime due to incident	0
Total:	3

73. In preventive order, by fact of road accidents, incidents described above, Health and Safety, Road Safety Engineer road safety conducted unscheduled trainings with making appropriate records in the training log.

74. Additional safety measures at Lot 7 site:

- To ensure the continuous vehicles traffic and safety of company and public transport, road signs are detailed checked for availability, cleanliness and damage. Road Safety and Safety Department, Site managers and Engineering Service specialist work closely together, and coordinate each other;
- Health and Safety, Road Safety Engineers developed a program for “Health and Safety at night time”, and also regularly inspect site during day and night time. If find out any violation of safety measures, a warning is given also for the worker and for Road Safety, Health and Safety specialists of the Contractor, and in case of repeated violation, instructions and letters are prepared to eliminate found violations;
- Contractor’s specialists assist to civilians in resolving technical problems with their vehicles. In general, the current state of compliance with safety measures and provision road safety can be considered as satisfactory.

#### **4.7. Trainings**

70. During the reporting period study about issues related to EMP implementation, monitoring of work on site, etc., CSC conducted in the order of accompanying consultation during environmental audits in August and October. During audit process, CSC instructed environmental specialists to pay the attention to the fixation of indicators of environmental measures implementation, and studied at work places to identify potential risks of negative environmental impact.
71. Health and Safety, Road Safety Engineers of the Contractor constantly control over following by safety measures and safely work progress, use of personal protective equipment on site. Information boards which show the main threats and risks at work places are installed in accommodations of base camp, in rest rooms.
72. For the first quarter of 2019, CSC planned a training by the theme: “Environmental and social safety on road construction projects”. The training program includes questions for preparation of analytical safeguard reports, identification and formulation of risks and development of corrective actions to eliminate negative impacts and noncompliance.

## 5. SSEMP (SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN) PROGRESS

### 5.1. SSEMP review

73. Possible environmental impacts are identified for the construction stage in the EIA of this project, which are given in the Table No. 13 as verification indicators for proper tracking of the assigned tasks:

**Table No.13: Information about EMP activities with project EIA**

Types of possible impacts according to EIA	Impact objects and subjects	Including activities to EMP *			
		Lot 4	Lot 5	Lot 6	Lot 7
Wrong location of facilities (construction camps, cut sections, borrow pits, storage places for materials and SHW / production wastes and etc.)	Water quality, soil pollution, local communities	-	-	+	+
Dust condition and emissions	Local communities	-	-	+	+
Uncontrolled operation of water resources	Local communities	-	-	-	+
Poaching, extermination of birds and animals, rare and endangered plants	Regional flora and fauna	-	-	+	+
Violation of technical regulations during communication relocation	Local communities	-	-	+	+
Law violation if find out previously not identified archaeological and cultural values	Cultural and historical heritage, Local communities	-	-	+	+
Violation of safety and health issues of project affected person	Local communities Employees, involved in construction works of the project	-	-	-	-

\*- EMP of Lots 4 and 5 on progress. Regarding Lot 6 – Health and Safety plan has been being revised.

**Table 14: Progress status of activities, earlier planned for the second half year of 2018**

Activities	Deadline	Responsible	Expected result	Progress status
SSEMP submission for construction facilities Lot 4, Lot 5 and Lot 6	06.09.18	Contractor Project manager Environmental safeguard manager	Approved document	Not conducted
Report submission for production and environmental monitoring of Lot 7	15.07.18 15.09.18 15.11.18	Contractor's environmental specialist	Approved document	Submitted reports for September and November, submitted semi-annual report for the first half year 2018
Submission of permit documents for borrow pits, plants of Lot 4, Lot 5 and Lot 6 by the Contractors	15.10.18	Project managers of Lot 4, Lot 5 and Lot 6	Legalization of all kind of works and emissions to the environment	Conducted
Organize informational works for environmental education among the Contractor's personnel and local people	Quarterly	Environmental safeguard manager of the Contractors Lot 4, Lot 5, Lot 6 and Lot 7	Reports of informational works, booklets and memo for environmental themes	Not conducted
Weekly report-notes of environmental specialist on monitoring of site works	Weekly	CSC	Reports and analytics of monitoring	Weekly schedule not followed, monthly report submits Lot 7 completed for November. For December is in process.
Organization of preventive works from negative impacts for flora and fauna taking into account regional features: during bird nesting season, migration	September-November	Environmental safeguard manager	Environmental specialist's photo reports and reports	In observation process
Agreement extension with the laboratory for environmental production control or the involvement of another laboratory with validity period of	25.10.18	Contractor's environmental specialist	Documents. Licenses and attachments for measurement instruments and work types	Conducted

license and certification				
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74. Work analysis of environmental specialist of the Contractor on Lot 7 shows that he has relevant potential to implement measures described in the EMP. The measures developed within the framework of the EMP, if properly implemented, can prevent the occurrence of a negative impact to the environment. Additional training is needed for forecasting skills and analytical work skills for production environmental control reports carried out by an internal organization. CSC notes that it is necessary to study carefully and to use subsequent laboratory data in his work in part of evaluating completed activities.
75. All necessary and justified measures based on the EIA of the project are included in SSEMP for Lot 7, but in fact some implemented measures on site have not been collected or recorded. It is related to health training programs (prevention of the proliferation HIV/AIDS). It is also necessary to strengthen the skills for the preparation of analytical reports in part of environmental safeguard.



## **6. ADVANCED METHODS (GOOD PRACTICES) AND OPPORTUNITIES FOR THEIR IMPROVEMENT**

### **6.1 Advanced methods (good practices)**

76. During monitoring process, CSC noted as a good practice at Lot 6 and Lot 7 sites it is building engagement with local authorities. The leading specialists of the Contractor weekly participate in meetings of local Akimat and in due course solve all issues raised by local population. The Contractor formed a good communication with local population, which allows to solve any problems in a short time, without expecting or ignoring needs and requirements of local population regarding issues about the project impact for life and lifestyle of local population. This practice allowed to use Grievance mechanism effectively in these areas. There was not registered any appeals at Lot 6 site. But boxes not installed yet at this site. This work on progress. All questions are solved in due course. At the moment all questions are related to choosing place for base camp and for material storage. During the reporting period appeals and complaints not registered at Lot 7 site.
77. As the response for Makat district Akimat's request, on 21.09.2018 the Contractor Lot 7 provided special machinery, i.e. 2 dump trucks and 1 motor grader for 5 operating hours to organize training activities for law enforcement authorities at the district. Also on 7.11.2018 provided 2 machineries for district territory cleaning. All these things are good practices to build engagement of the project.

### **6.2 Opportunity for improvement**

78. At the moment such things are not found out for this construction project.

## 7 SUMMARY CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Conclusions

79. Effective safeguard measures on the project include the following:

- the best planning of construction works, which allowed the Contractor not to collect a large amount of machineries in small areas, especially in sensitive areas. Constant adjustment of watering machine' work schedule taking into account all factors affecting to dust process;
- an organizational structure that allows the environment management system to work effectively. The contractor's organizational structure is included vertical and horizontal interactions and site employees (master, foremen, etc.) are involved to this process.

**Table 15. Corrective action Plan for Lot 4 and Lot 5 (January-June 2019)**

Actions	Deadline	Responsible	Expected result
To mobilize key expert for environmental safeguard	January 2019	Contractor's Project manager	Approved candidate on site with constant work schedule
To submit EMP and its attachment plans for approval	January 2019	Contractor's Project manager	Approved EMP of Lot 4 and Lot 5
Training jointly with PMC and CSC for Contractors' environmental and social specialists	February-March 2019	CSC	Environmental specialists have all instruments for register daily record and own audits, they have skills to prepare reports and to do monitoring and EMP activities

**Table 16. Corrective action Plan for Lot 6 (January-June 2019)**

Actions	Deadline	Responsible	Expected result
To develop and approve schedule for SHW disposal from temporary storage of all facilities including Engineer's office, construction site, production base, laboratory and etc.	February 2019	Contractor's environmental specialist	Approved document and log book for SHW and production waste disposal. Effective waste management
To submit Program and plan for Health and Safety	February 2019	Contractor's environmental specialist	Approved Plan and program for Health and Safety. Follow contract conditions in part of Health and safety

Training jointly with PMC and CSC for Contractors' environmental and social specialists	February-March 2019	CSC	Environmental specialists have all instruments for register daily record and own audits, they have skills to prepare reports and to do monitoring and EMP activities
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**Table 17. Corrective action Plan for Lot 7 (for January-June 2019)**

<b>Actions</b>	<b>Deadline</b>	<b>Responsible</b>	<b>Expected result</b>
To develop and approve schedule for SHW disposal from temporary storage of all facilities including Engineer's office, construction site, production base, laboratory and etc.	February 2019	Contractor's environmental specialist	Approved document and log book for SHW and production waste disposal. Effective waste management
Conduct Health and Safety trainings	Regularly starting from January 2019	Contractor's environmental specialist	No incidents on the road

## 7.2. Recommendations

79. It is recommended to revise the number of work months for safeguard specialist of the CSC, since the periodic involvement and intermittent work schedule of this specialist cannot allow to work effectively on site with the Contractor's environmental specialists. Due to remote work it is not possible to check all plans' (attachment plans) implementation and work analysis.

## Attachments

### Attachment No.1

#### Project permit documents / Lot-7

Document name	Information and document status
"Aktobe-Makat" Road - km 487-504	Permission for environmental emission for objects category IV, No.KZ83VDD00081237 dated 20.11.2017
Project "Environmental Impact Assessment (EIA)"	Developed in 2015, submitted for approval to State Environmental Expertise Department of Atyrau regional Natural Resources Management and Environmental Management Department on 04.04.2016 No.92. Approved number: E14-0022/16 received on 18.04.2016.
Act for land use for land with size 62.24 hectare for reconstruction of "Aktobe -Makat - border of RF (to Astrakhan)" road	No. 0138010, issued by Makat district department of Atyrau regional RSE "National Center of Expertise" dated December 31, 2015.
Land allocated for reconstruction of A-27 "Aktobe-Makat-border of Russian Federation (to Astrakhan) km 487-504" road, total area 62.24 hectar	Decree of Makat district Akimat of Atyrau region dated December 30, 2015 No. 289 "About giving a right for land allocation by the Committee for Roads of the Ministry of Investments and Development of the Republic of Kazakhstan"
Borrow pit and its work status	On 28.05.2018, the Contractor has received permission3 borrow pits for environmental emission for objects category IV, No. KZ8VDD00094352
Borrow pit and its work status About compliance with the requirements for keeping animals during road reconstruction	RSE "Atyrau regional territorial inspection of forestry and animals of the Ministry of Agriculture of the Republic of Kazakhstan" - letter dated June 21, 2016 No. 05-06 / 953
Environmental monitoring	Concluded an agreement from 28.03.2018 with testing laboratory LLP "Environmental Analytical laboratory" in Atyrau. From June 4 to 11 they have conducted base line.

SHW and waste disposal and processing services	<p>Concluded an agreement from 29.03.2018 with "WEST DALA" LLP.</p> <p>Concluded an agreement from 05.02.2018 with "Tazalyk – Kogal" LLP</p>
SSEMP with 10 environmental action plans	<p>Lots 4 and 5 - first submission was on 16.11.2018. Not approved by the Engineer.</p> <p>Lot 6 - submitted on 16.11.2018 after adjustments and approved by the Engineer on 22.11.2018.</p> <p>Lot 7 submitted first submission on 10.01.2018. After corrections was submitted on 23.04.2018 for CSC's review.</p> <p>The Engineer gave instructions for correction on 16.05.2018.</p> <p>All plans have been approved by CSC and PMC on 22.05.2018.</p>
For special water use	<p>Culvert from "Atyrau Su Arna" LLP.</p> <p>There is an agreement for drinking and technical water.</p>

**Attachment 2**

**Permit Documents for Section Km 418-458 / LOT 6**

<b>Name of Production Facility</b>	<b>Description</b>
"Aktobe-Makat" Section Km 418-468 Reconstruction of "Aktobe - Atyrau-RF Border (to Astrakhan)" A-27 National Road, Section Km 418-458	Permit and conclusion acquired on 29.10.2018
Road Maintenance Depot (RMD) construction at Km 477-478 of Makat village.	The document package is being prepared by Contractor.
Asphalt Plant	Permit is not acquired. The document package preparation to apply at "E-gov" portal is in process.
Borrow pits #1, #2, #3, #4, #5, #6, #7, #8.	Permit is not acquired. Borrow pits' document package preparations are in process.
Third party ecologic production monitoring	The contract is concluded with "Analytical laboratory on environment protection" LLP research company in Atyrau on 17.01.2019
Solid wastes, production and hazard wastes, sewages removal and disposal	The contract is not concluded. The work to choose waste removal and disposal company is at completion stage
Facilities' Environment Management Plan	First version submitted on 16.11.2018. The Engineer issued comments on 21.11.2018 to correct the EMPs. Health and Safety Program and Program for non-proliferation of STI, STD, HIV / AIDS among workers and local public are not prepared
The start of Grievance report.	Not started. Looking for candidates to employ as Social Safeguarding Specialist.
Water use for special purpose	The water pipeline is installed. The agreement is concluded with "Sadykova" Sole Entrepreneur on 4.12.2018.
Railway dead end	The contract is concluded with "QZ Terminal" LLP on 14.09.2018.

### Attachment No.3

#### Measurement results of noise level Lot 7

Place / Measurement points	MAL of noise (dBa)	September 21.09.18 (dBa)	November 19.11.18 (dBa)
Borrow pit No.1	80		77
Borrow pit No.2	80		77
Borrow pit No.3	80		78
Laboratory	90		78
Constructed road windward / downwind	80	77/75	78/76
Asphalt concrete plant, base camp point 1	80	63	71
Point 2	80	70	70
Point 3	80	71	70
Point 4	80	70	68

#### Measurement results of vibration level Lot 7

Place / Measurement points	MAL of vibration (dB)	September 21.09.18 (dB)	November 16.11.18 (dB)
Borrow pit No.1	70	79	
Borrow pit No.2	70	76	
Borrow pit No.3	70	76	
Laboratory	70	49	
Construction road (km 487, km 500, km 504)	70		26 30 38
Operator's room in Asphalt concrete plant	70		30 29 32

## Attachment 3.1

### Protocols of laboratory researches Noise and Vibration

#### Noise

Қазақстан Республикасы Денсаулық сақтау министрлігі Министерство здравоохранения Республики Казахстан	Нысанның БҚСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО
ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШЖҚ РМК Атырау облысы бойынша филиалының Мақат аудандық бөлімшесі Мақатское районное отделение филиала РГП на ПХВ «Национальный центр экспертизы» КООЗ МЗ РК по Атырауской области	Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы «30» мамырдағы №415 бұйрығымен бекітілген №134/е нысанды медициналық құжаттама Медицинская документация Форма №134/у Утверждена приказом Министра национальной экономики Республики Казахстан от «30» мая 2015 года №415

Шу деңгейлерін өлшеудің  
 ХАТТАМАСЫ  
 ПРОТОКОЛ  
 измерения уровней шума  
 № 6-7

от « 21 » 09 2018 ж. (г.)

1.Шаруашылық жүргізуі объектінің толық атауы, мекенжайы (Полное наименование хозяйствующего объекта, адрес) Доссор кенті, «Ант Иншаат Маден Санайн Аноним Шеркети АҚ Қазақстан филиалы»

цех, учаске (цех, участок)

2.Өлшеу мақсаты (Цель измерения) Өтінішпен ( по письму )

3.Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

4.Өлшеу құралдары (Средства измерений) Шумомеры – анализаторы спектра "Октава – 110А" зав.№ А091858

(атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер))

5.Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА12-05-5437

6.Берілген күні мен куәліктің нөмірі (дата и номер свидетельства) 10.10.2017 ж. (г.)- 10.10.2018 ж. (г.)

7.Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НҚ-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) ГОСТ 12.1.050-86 Методы измерения шума на рабочих местах.

8.Негізгі шу көздері мен олар тудыратын шудың сипаты (Основные источники шума и характер создаваемого ими шума) \_

9.Мөлшері(Объем) \_

10.Топтама нөмірі(Номер партий) \_

11.Өндірілген мерзімі (Дата выработки) \_

12.Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

13.Шу көзі және микрофондардың (датчиктер) орнатылған орындары мен олардың бағыты тілдермен көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орнының, қол машинасының) \_

14. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территории, рабочего места, ручной машины) с нанесением источника шума и указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров.



Өлшеулер нәтижелері(Результаты измерений)

Тіркеу нөмірі Регистр ационн ый номер	Кескіні бойынша нүкте нөмірі Номер точки по эскизу	Өлшеу орны (жабдықтың маркасы, түрі, құжат деректері көрсетілсін) Место замера (указать марку, тип, паспортные данные оборудования)	Қосымша мәліметтер (өлшеу шарттары, шудың жұмыс ауысша ішіндегі әсерінің ұзақтығы) Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Шудың сипаты Характер шума					
				СпектрБойын ша		Уақыт сипаттамалары бойынша По временным характеристикам			
				Кенду ысты Широ коп ло стной	Тонд ы Тонал ьный	Тұрақ ты Посто янный	Толқ ымал ы Колеб лющи йся	Ұзым е лі Прерыв истый	Импульсті Импульсный
1	2	3	4	5	6	7	8	9	10
№ 6		Мониторинг карьеров							
X№1				+				+	
X№2				+				+	
X№3				+				+	
	Экв. за смену								
№7		Лаборатория							
X№1				+				+	

Октавалық жолақта дБ-мен ортагеометриялық жылгі Гц-дағы дыбыстық қысымның деңгейлері Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц														L <sub>A</sub> дыбыс деңгейі (дыбыстың балама деңгейі)/L <sub>A</sub> дБА дыбыстың ең жоғарғы деңгейі Уровень звука L <sub>A</sub> (эквивалентный уровень звука) / Максимальный уровень звука L <sub>A</sub> дБА	Норма бойынша L <sub>A</sub> дыбыстың рұқсат етілетін деңгейі / L <sub>A</sub> дБА дыбысының ең жоғарғы рұқсат берілетін деңгейі Допустимый уровень звука L <sub>A</sub> по норме / Максимальный допустимый уровень звука L <sub>A</sub> дБА
1	25	26	8	16	31,5	63	125	250	500	1000	2000	4000	8000		
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
					74	75	77	75	76	77	78	78	79		80
					72	72	71	71	72	72	75	73	76		80
					74	74	73	75	74	77	76	74	76		80
	90х	0,3			75х	0,3		78х	0,3		78х	11,1			
					68	64	62	60	59	57	55	53	49		75

Қазақстан Республикасы Денсаулық сақтау министрлігі Министерство здравоохранения Республики Казахстан  ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШЖК РМК Атырау қаласы, Гурьевская көшесі, 7а Тел(факс)8(7122)32-23-36 Филиал РГП на ПХВ «Национальный центр экспертиз» Комитета ООЗ Атырауской области г. Атырау, ул. Гурьевская, 7а тел 8(7122)32-23-36	Нысаным БКСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО  Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы «30» мамырдағы №415 бұйрығымен бекітілген №134/е нысаным медициналық құжаттама Медицинская документация Форма №134/у Утверждена приказом Министра национальной экономики Республики Казахстан от «30» мая 2015 года №415
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Шу деңгейлерін өлшеудің  
 ХАТТАМАСЫ  
 ПРОТОКОЛ  
 измерения уровней шума

№ 8-9

от « 21 » 09 2018 ж. (г.)

1.Шаруашылық жүргізуі объектінің толық атауы, мекенжайы (Полное наименование хозяйствующего объекта, адрес) Доссор кенті, «Ант Иншаат Маден Санайи»  
Аноним Шеркети АҚ Қазақстан филиалы »

цех, учаске (цех, участок)

2.Өлшеу мақсаты (Цель измерения) Өтінішпен ( по письму )

3.Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

4.Өлшеу құралдары (Средства измерений) Шұзомсры – анализаторы спектра “Октава – 110А” сер.№ А091858

(атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер)

5.Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА12-05-5437

6.Берілген күні мен куәліктің нөмірі (дата и номер свидетельства) 10.10.2017 ж. (г.)- 10.10.2018 ж. (г.)

7.Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НҚ-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) ГОСТ 12.1.050-86 Методы измерения шума на рабочих местах

8.Негізгі шу көздері мен олар тудыратын шудың сипаты (Основные источники шума и характер создаваемого ими шума)

9.Мөлшері(Объем) -

10.Топтама нөмірі(Номер партий) -

11.Өндірілген мерзімі (Дата выработки) -

12.Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

13.Шу көзі және микрофондардың (датчиктер) орналасқан орындары мен олардың бағыты тілдермен көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орынының, қол машинасының)

14. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территории, рабочего места, ручной машины) с нанесением источника шума и указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров.

Өлшеулер нәтижелері(Результаты измерений)

Тіркеу нөмірі Регистр ационн ый номер	Кескін бойынша нүкте нөмірі Номер точки по эскизу	Өлшеу орны (жабдықтың маркасы, түрі, құжат деректері көрсетілсін) Место замера (указать марку, тип, паспортные данные оборудования)	Қосымша мәліметтер (өлшеу шарттары, шудың жұмыс ауыспа ішіндегі әсерінің ұзақтығы) Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Шудың сипаты Характер шума					
				Спектр бойынша		Уақыт сипаттамалары бойынша			
				По спектру		По временным характеристикам			
				Кең жылы Широ копол стной	Тонд ы Тонал ьный	Тұрақ ты Посто янный	Толқ ымал ы Колеб лющи йся	Ұзым е лі Прерыв истый	Импульсті Импульсный
1	2	3	4	5	6	7	8	9	10
№ 8		Мониторинг на строительства дорог							
X№1				+				+	
X№2				+				+	
	Экв. за смену								
№ 9		Мониторинг на границе СЗЗ предприятия АБЗ, вахтовый городок и столовый.							
X№1				+				+	
X№2				+				+	
X№3				+				+	
X№4				+				+	
	Экв. за смену								

Октавалық жолақта дБ-мен ортагеометриялық жиілігі Гц-дағы дыбыстық қысымның деңгейлері Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц														L <sub>A</sub> дыбыс деңгейі (дыбыстың балама деңгейі) L <sub>A</sub> , дБА дыбыстың ең жоғарғы деңгейі Уровень звука L <sub>A</sub> (эквивалентный уровень звука) / Максимальный уровень звука L <sub>A</sub> , дБА	Норма бойынша L <sub>A</sub> дыбыстың рұқсат етілетін деңгейі / L <sub>A</sub> дБА дыбысының ең жоғарғы рұқсат берілетін деңгейі Допустимый уровень звука L <sub>A</sub> по норме / Максимальный допустимый уровень звука L <sub>A</sub> , дБА
1	25	26	8	16	31,5	63	125	250	500	1000	2000	4000	8000		
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
					64	66	67	70	72	75	76	78	77		80
					60	63	65	65	67	68	70	73	75		80
	90х	0,3			75х	0,3		78х	0,3		78х	11,1			
					49	51	49	49	52	55	58	60	63		80
					48	50	52	54	58	61	64	67	70		80
					49	52	54	57	59	63	66	68	71		80
					51	53	55	57	60	62	65	67	70		80
	90х	0,3			66х	0,3		71х	0,3		71х	11,1			

Үлгілердің (нің) НҚ-ға сәйкестігіне зерттеулер жүргізілді (Исследование проводилось на соответствие НД Бірінгей санитариялық-эпидемиологиялық және гигиеналық талаптар ҚО шепімімен бекітілген санитариялық-эпидемиологиялық (бақылауға) (Единое санитарно-эпидемиологические и гигиенические требования надзору (контролю) Утв. решением Комиссии Таможенного союза 18 июня 2010 года № 299).

Лаборант (зерттеуші) \_\_\_\_\_  \_\_\_\_\_ Балмуханова К.А.



Санитарлық-эпидемиологиялық сараптама орталығының басшысы (орынбасары)  
Руководитель Центра санитарно-эпидемиологической экспертизы (заместитель)

Бөлімше басшысының у.м.а \_\_\_\_\_  \_\_\_\_\_ Ердыбаева Г.Т.  
Т.А.Ә., қолы (Ф.И.О., подпись)

Хаттама 2 данада толтырылады (Протокол составляется в 2-х экземплярах)

Сынау нәтижелері тек қана сынауға түсірілген үлгілерге қолданылады/Результаты исследования распространяются только на образцы, подвергнутые испытанию

Рұқсатсыз хаттаманы жартылай қайта басуға ТЫЙЫМ САЛЫНҒАН/ Частичная перепечатка протокола без разрешения ЗАПРЕЩЕНА

Қазақстан Республикасы Денсаулық сақтау министрлігі Министерство здравоохранения Республики Казахстан  ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШДЖҚ РМК Атырау қаласы, Гурьевская көшесі, 7а Тел(факс) 8(7122)32-23-36 Филиал РГП на ПХВ «Национальный центр экспертизы» Комитета ООЗ Атырауской области г. Атырау, ул. Гурьевская, 7а тел 8(7122)32-23-36	Нысанның БҚСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО  Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы «30» мамырдағы №415 бұйрығымен бекітілген №134/е нысанды медициналық құжаттама Медицинская документация Форма №134/у Утверждена приказом Министра национальной экономики Республики Казахстан от «30» мая 2015 года №415
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Шу деңгейлерін өлшеудің  
 ХАТТАМАСЫ  
 ПРОТОКОЛ  
 измерения уровней шума  
 № 10-11  
 от « 19 » 11 2018 ж. (г.)

1. Шаруашылық жүргізуі объектінің толық атауы, мекенжайы (Полное наименование хозяйствующего объекта, адрес) Доссор кенті, «Анг Иншаат Маден Санайи Аноним Шеркети АК Қазақстан филиалы»  
 цех, учаске (цех, участок)

2. Өлшеу мақсаты (Цель измерения) Өтінішпен (по письму)

3. Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

4. Өлшеу құралдары (Средства измерений) Шумомеры – анализаторы спектра “Октава – 110А” зав. № А091858  
 (атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер))

5. Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА12-05-4497

6. Берілген күні мен куәліктің нөмірі (дата и номер свидетельства) 12.09.2018 ж. (г.) - 12.09.2019 ж. (г.)

7. Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НҚ-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) ГОСТ 12.1.050-86 Методы измерения шума на рабочих местах.

8. Негізгі шу көздері мен олар тудыратын шудың сипаты (Основные источники шума и характер создаваемого ими шума) \_\_\_\_\_

9. Мөлшері (Объем) \_\_\_\_\_

10. Топтама нөмірі (Номер партий) \_\_\_\_\_

11. Оңдірілген мерзімі (Дата выработки) \_\_\_\_\_

12. Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

13. Шу көзі және микрофондардың (датчиктер) орнатылған орындары мен олардың бағыты тілдермен көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орнының, қол машинасының) \_\_\_\_\_

14. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территории, рабочего места, ручной машины) с нанесением источника шума и указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров.



Өлшеулер нәтижелері(Результаты измерений)									
Тіркеу нөмірі Регистр ационн ый номер	Кескіні бойынша нүкте нөмірі Номер точки по эскизу	Өлшеу орны (жабдықтың маркасы, түрі, құжат деректері көрсетілсін) Место замера (указать марку, тип, паспортные данные оборудования)	Қосымша мәліметтер (өлшеу шарттары, шудың жұмыс ауысша ішіндегі әсерінің ұзақтығы) Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Шудың сипаты Характер шума					
				СпектрБойын ша		Уақыт сипаттамалары бойынша По временным характеристикам			
				Кеңжы ысты Широ копло стной	Тонд ы Тонал ьный	Тұрақ ты Посто янный	Толқ ымал ы Колеб лющи йся	Ұзілме лі Прерыв истый	Импульсті Импульсный
1	2	3	4	5	6	7	8	9	10
№ 10		Мониторинг на строительства дорог							
X№1				+				+	
X№2				+				+	
	Экв. за смену								
№ 11		Мониторинг на границе СЗЗ предприятия АБЗ, вахтовый городок и столовый.							
X№1				+				+	
X№2				+				+	
X№3				+				+	
X№4				+				+	
	Экв. за смену								



Октавалық жолақта дБ-мен ортагеометриялық жиілігі Гц-дағы дыбыстық қысымның деңгейлері Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц														L <sub>A</sub> дыбыс деңгейі (дыбыстың балама деңгейі) L <sub>A</sub> , дБА дыбыстың ең жоғарғы деңгейі Уровень звука L <sub>A</sub> (эквивалентный уровень звука) / Максимальный уровень звука L <sub>A</sub> , дБА	Норма бойынша L <sub>A</sub> дыбыстың рұқсат етілетін деңгейі / L <sub>A</sub> , дБА дыбысының ең жоғарғы рұқсат берілетін деңгейі Допустимый уровень звука L <sub>A</sub> по норме / Максимальный допустимый уровень звука L <sub>A</sub> , дБА
1	25	26	8	16	31,5	63	125	250	500	1000	2000	4000	8000		
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
					58	60	62	65	66	68	71	76	78		80
					60	62	65	67	68	70	72	74	76		80
	90x	0,3			75x	0,3		78x	0,3		78x	11,1			
					49	52	54	57	59	63	66	68	71		80
					51	53	55	57	60	62	65	67	70		80
					48	50	52	54	58	61	64	67	70		80
					50	52	55	57	58	60	62	64	68		80
	90x	0,3			66x	0,3		71x	0,3		71x	11,1			

Үлгілердің (нің) НҚ-ға сәйкестігіне зерттеулер жүргізілді (Исследование проводилось на соответствие НД Бірінші санитариялық-эпидемиологиялық және гигиенические требования к дорогам КО шешімімен бекітілген санитариялық-эпидемиологиялық (бақыдауға) (Единое санитарно-эпидемиологические и гигиенические требования надзору (контролю) Утв. решением Комиссии Таможенного союза 18 июня 2010 года № 299).

Лаборант (зерттеуші)



Балмуханова К.А.



Мер орны  
Место печати

Санитарлық-эпидемиологиялық сараптама орталығының басшысы (орынбасары)  
Руководитель Центра санитарно-эпидемиологической экспертизы (заместитель)

Бөлімше басшысының у.м.а



Ерлыбаева Г.Т.

Т.А.Ә., қолы (Ф.И.О., подпись)

Хаттама 2 данада толтырылады (Протокол составляется в 2-х экземплярах)

Сынау нәтижелері тек қана сынауға түсірілген үлгілерге қолданылады/Результаты исследования распространяются только на образцы, подвергнутые испытанию

Рұқсатсыз хаттаманы жартылай қайта басуға ТЫЙЫМ САЛЫНҒАН/ Частичная перепечатка протокола без разрешения ЗАПРЕЩЕНА

Қазақстан Республикасы Денсаулық сақтау министрлігі Министерство здравоохранения Республики Казахстан  ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШЖҚ РМК Атырау қаласы, Гурьевская көшесі, 7а Тел(факс)8(7122)32-23-36 Филиал РГП на ПХВ «Национальный центр экспертизы» Комитета ООЗ Атырауской области г. Атырау, ул. Гурьевская, 7а тел 8(7122)32-23-36	Нысанның БҚСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО  Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы «30» мамырдағы №415 бұйрығымен бекітілген №134/е нысанды медициналық құжаттама Медицинская документация Форма №134/у Утверждена приказом Министра национальной экономики Республики Казахстан от «30» мая 2015 года №415
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**Шу деңгейлерін өлшеудің  
ХАТТАМАСЫ  
ПРОТОКОЛ  
измерения уровней шума  
№ 12-13  
от «19» 11 2018 ж. (г.)**

1.Шаруашылық жүргізуі объектінің толық атауы, мекенжайы (Полное наименование хозяйствующего объекта, адрес) Доссор кенті, «Ант Иншаат Маден Санайи»  
Аноним Шеркети АҚ Қазақстан филиалы »

2.Өлшеу мақсаты (Цель измерения) Отінішпен (по письму) цех, учаске (цех, участок)

3.Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

4.Өлшеу құралдары (Средства измерений) Шумомеры – анализаторы спектра “Октава – 110А” зав.№ А091858  
 (атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер))

5.Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА12-05-4497

6.Берілген күні мен куәліктің нөмірі (дата и номер свидетельства) 12.09.2018 ж. (г.)- 12.09.2019 ж. (г.)

7.Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НҚ-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) ГОСТ 12.1.050-86 Методы измерения шума на рабочих местах.

8.Негізгі шу көздері мен олар тудыратын шудың сипаты (Основные источники шума и характер создаваемого ими шума) \_\_\_\_\_

9.Мөлшері(Объем) \_\_\_\_\_

10.Топтама нөмірі(Номер партий) \_\_\_\_\_

11.Өндірілген мерзімі (Дата выработки) \_\_\_\_\_

12.Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

13.Шу көзі және микрофондардың (датчиктер) орнатылған орындары мен олардың бағыты тілдермен көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орнының, кол машинасының) \_\_\_\_\_

14. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территории, рабочего места, ручной машины) с нанесением источника шума и указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров.

Өлшеулер нәтижелері (Результаты измерений)				Шудың сипаты Характер шума					
Проекттің нөмірі гистро- метри- онный номер	Кескіні бойынша нүкте нөмірі Номер точки по эскизу	Өлшеу орны (жабдықтың маркасы, түрі, құжат деректері көрсетілсін) Место замера (указать марку, тип, паспортные данные оборудования)	Қосымша мәліметтер (өлшеу шарттары, шудың жұмыс ауысуына ішіндегі әсерінің ұзақтығы) Дополнительные сведения (условия замера, продолжительность воздействия шума в течение рабочей смены)	Спектр бойынша По спектру		Уақыт сипаттамалары бойынша По временным характеристикам			
				Кеңі- сті Широ- копо- лостной	Тон- ды Тонал- ный	Тұрақ- ты Посто- янный	Толқ- ымал ы Колеб- лющи- йся	Үзілме- лі Прерыв- истый	Импульсті Импульсный
1	2	3	4	5	6	7	8	9	10
№ 12		Мониторинг карьеров		+				+	
X№1				+				+	
X№2				+				+	
X№3									
	Экв. за смену								
№ 13		Лаборатория		+				+	
X№1									



Октавалық жолақта дБ-мен ортагеометриялық жиілігі Гц-дағы дыбыстық қысымның деңгейлері Уровни звукового давления в дБ октавных полосах со среднегеометрическими частотами в Гц														Л <sub>д</sub> дыбыс деңгейі (дыбыстың балама деңгейі)/L <sub>д</sub> , дБА дыбыстың ең жоғарғы деңгейі Уровень звука L <sub>д</sub> (эквивалентный уровень звука) / Максимальный уровень звука L <sub>д</sub> , дБА	Норма бойынша L <sub>д</sub> дыбыстың рұқсат етілетін деңгейі / L <sub>д</sub> , дБА дыбысының ең жоғарғы рұқсат берілетін деңгейі Допустимый уровень звука L <sub>д</sub> по норме / Максимальный допустимый уровень звука L <sub>д</sub> , дБА
1	25	26	8	16	31,5	63	125	250	500	1000	2000	4000	8000		
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
					66	68	69	71	73	75	75	76	77		80
					64	66	65	67	69	70	72	75	77		80
					65	66	68	70	71	73	75	77	78		80
	90x	0,3			75x	0,3		78x	0,3		78x	11,1			
					62	64	67	68	70	72	75	76	78		75

Үлгілердің (нің) НҚ-ға сәйкестігіне зерттеулер жүргізілді (Исследование проводилось на соответствие НД) Адамға әсер ететін физикалық факторлардың гигиеналық нормативтерін бекіту туралы ҚР Ұлттық экономика министрінің 2015 жылғы 28 ақпандағы № 169 бұйрығы, Об утверждении Гигиенических нормативов к физическим факторам, оказывающим воздействие на человека Приказ Министра национальной экономики Республики Казахстан от 28 февраля 2015 года № 169

Зерттеу жүргізген адамның қолы, Т.А.Ә. (Ф.И.О., подпись лица, проводившего исследование)

Зерттеуші (лаборант)  Балмуханова К.А.



Мөр орны  
Место печати

Мемлекеттік санитарлық-эпидемиологиялық сараптама орталығының басшысы(орынбасары)  
Руководитель центра санитарно-эпидемиологической экспертизы (заместитель)

Макат аудандық бөлімше басшысының у.м.а.  
Т.А.Ә., қолы (Ф.И.О., подпись)

 Г.Т.Ердыбаева

Хаттама 2 данада толтырылады (Протокол составляется в 2-х экземплярах)

Сынау нәтижелері тек қана сынауға түсірілген үлгілерге қолданылады/Результаты исследования распространяются только на образцы, подвергнутые испытанием

Рұқсатсыз хаттаманы жартылай қайта басуға ТЫЙЫМ САЛЫНҒАН/ Частичная перепечатка протокола без разрешения ЗАПРЕЩЕНА

Қазақстан Республикасы Денсаулық сақтау министрінің Министерство здравоохранения Республики Казахстан ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШЖҚ РМК Атырау облысы бойынша филиалының Мақат аудандық бөлімшесі Мақатское районное отделение филиала РГП на ПХВ «Национальный центр экспертизы» КООЗ МЗ РК по Атырауской области	Нысанның БҚСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы «30» мамырдағы №415 бұйрығымен бекітілген № 133/е нысанды медициналық құжаттама Медицинская документация Форма № 133/у Утверждена приказом Министра национальной экономики Республики Казахстан от «30» мая 2015 года №415
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# Діріл деңгейлерін өлшеудің

## ХАТТАМАСЫ

### ПРОТОКОЛ

#### измерения уровней вибрации

№ 2

от « 21 » 09 2018 ж. (г.)

1. Нысанның толық атауы, мекенжайы(Полное наименование хозяйствующего объекта, адрес Доссор кенті, «Ант Иншаат Маден Сснайн Аноним Шеркети» АҚ Қазақстан

цех, учаске (цех, участок)

2. Өлшеу мақсаты (Цель измерения) Бірінші санитариялық-эпидемиологиялық және гигиеналық талаптар.ҚО шешімімен бекітілген санитариялық-эпидемиологиялық (бақылауға) (Единое санитарно-эпидемиологические и гигиенические требования надзору (контролю) Утв. решением Комиссии Таможенного союза 18 июня 2010 года № 299).

3. Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

4. Өлшеу құралдары (Средства измерений) Шумомеры – анализаторы спектра “Октава – 110А” № А091858

атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер)

5. Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА-12-05-6192 от 28.10.2017 ж (г)- до 28.10.2018 ж (г)  
 берілген күні мен куәліктің нөмірі (дата и номер свидетельства)

6. Мөлшері (Объем) -

7. Топтама нөмірі (Номер партий) -

8. Өндірілген мерзімі (Дата выработки) -

9. Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НҚ-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) МЕСТ31319-2006 Діріл. Адамға әсер ететін жалпы діріл және бағалау өлшеу. Жұмыс орынында өлшеу үшін талаптар (ГОСТ 31319-2006 Вибрация Измерение общей вибрации и оценка ее воздействия на человека. Требования к проведению измерений на рабочих местах)

10. Негізгі діріл көздері мен олар тудыратын дірілдің сипаты (Основные источники вибрации и характер создаваемой вибрации) компьютер

11. Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

12. Діріл көзі көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орының, қол машинасының) және микрофондардың (датчиктер) орнатылған орындары мен олардың бағыты тілдермен көрсетілуімен. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территория, рабочего места, ручной машины) с нанесением источника вибрации с указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров)

[illegible]



[illegible]

Үлгілердің (нің) НҚ-ға сәйкестігіне зерттеулер жүргізілді (Исследования проводились на соответствие НД Бірінғай санитариялық-эпидемиологиялық және гигиеналық талаптар.КО шешімімен бекітілген санитариялық-эпидемиологиялық (бақылауға) (Единое санитарно-эпидемиологические и гигиенические требования надзору (контролю) Утв. решением Комисси Таможенного союза 18 июня 2010 года № 299).

Лаборант (зерттеуші) Балмуханова К.А.

Мөр орны  
Место печати

Санитарлық-эпидемиологиялық сараптама орталығының басшысы (орынбасары)  
Руководитель Центра санитарно-эпидемиологической экспертизы (заместитель)

Бөлімше басшысының у.м.а Ердыбаева Г.Т.  
Т.А.Ә., қолы (Ф.И.О., подпись)

Хаттама 2 данада толтырылады (Протокол составляется в 2-х экземплярах)

Сынау нәтижелері тек қана сынауға түсірілген үлгілерге қолданылады/Результаты исследования распространяются только на образцы, подвергнутые испытанию

Рұқсатсыз хаттаманы жартылай қайта басуға ТЫЙЫМ САЛЫНҒАН/ Частичная перепечатка протокола без разрешения ЗАПРЕЩЕНА

Қазақстан Республикасы Денсаулық сақтау министрлігі Министерство здравоохранения Республики Казахстан  ҚР ДСМ Қоғамдық денсаулық сақтау комитетінің «Ұлттық сараптама орталығы» ШЖК РМК Атырау қаласы, Гурьевская көшесі, 7а Тел(факс) 8(7122)32-23-36 Филиал РГП на ПХВ «Национальный центр экспертизы» Комитета ООЗ Атырауской области г. Атырау, ул. Гурьевская, 7а тел 8(7122)32-23-36	Нысанның БҚСЖ коды Код формы по ОКУД ҚҰЖЖ бойынша ұйым коды Код организации по ОКПО  Қазақстан Республикасы Ұлттық экономика министрінің 2015 жылғы « 30 » мамырдағы №415 бұйрығымен бекітілген № 133/е нысанды медициналық құжаттама Медицинская документация Форма № 133/у Утверждена приказом Министра национальной экономики Республики Казахстан от « 30 » мая 2015 года №415
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**Діріл деңгейлерін өлшеудің  
ХАТТАМАСЫ  
ПРОТОКОЛ  
измерения уровней вибрации**  
 № 3  
 от « 19 » 11 2018 ж. (г.)

6. Нысанның толық атауы, мекенжайы (Полное наименование хозяйствующего объекта, адрес Доссор кенті, «Ант Иншаат Маден Сенайи Аноним Шеркети» АҚ Қазақстан  
 нех, учаске (нех, участок)

7. Өлшеу мақсаты (Цель измерения) Бірінші санитариялық-эпидемиологиялық және гигиеналық талаптар КО шешімімен бекітілген санитариялық-эпидемиологиялық (бақылауға) (Елиное санитарно-эпидемиологические и гигиенические требования надзору (контролю) Утв. решением Комиссии Таможенного союза 18 июня 2010 года № 299)

8. Өлшеулер нысан өкілінің қатысуымен жүргізілді (Замеры проводились в присутствии представителя объекта) эколог

9. Өлшеу құралдары (Средства измерений) Шумомеры – анализаторы спектра “Октава – 110А” № А091858  
 атауы, түрі, инвентарлық нөмірі (наименование, тип, инвентарный номер)

10. Мемлекеттік тексеру туралы мәліметтер (Сведения о государственной поверке) № ВА-12-05-4497 от 12.09.2018ж (г.) до 12.09.2019 ж (г.)  
 берілген күні мен куәліктің нөмірі (дата и номер свидетельства)

6. Мөлшері (Объем) -

7. Топтама нөмірі (Номер партии) -

8. Өндірілген мерзімі (Дата выработки) -

9. Жүргізілген өлшеулер мен берілген санитариялық-эпидемиологиялық қорытынды мына НК-ға сай жүргізілді (НД, в соответствии с которой проводились измерения) МЕСТ 31319-2006 Діріл. Адамға әсер ететін жалпы діріл және бағалау өлшеу. Жұмыс орнында өлшеу үшін талаптар (ГОСТ 31319-2006 Вибрация. Измерение общей вибрации и оценка ее воздействия на человека. Требования к проведению измерений на рабочих местах)

10. Негізгі діріл көздері мен олар тудыратын дірілдің сипаты (Основные источники вибрации и характер создаваемой вибрации) компьютер

11. Жұмыс істейтін адамдардың саны (Количество работающих человек) 10

12. Діріл көзі көрсетілген үй-жайдың кескіні (аумақтың, жұмыс орнының, қол машинасының) және микрофондардың (датчиктер) орнатылған орындары мен олардың бағыты тілдермен көрсетілуімен. Өлшеу нүктелерінің реттік нөмірлері. (Эскиз помещения (территории, рабочего места, ручной машины) с нанесением источника вибрации с указанием стрелками мест установки и ориентации микрофонов (датчиков). Порядковые номера точек замеров)

[illegible]





Үлгілердің (нің) НҚ-ға сәйкестігіне зерттеулер жүргізілді (Исследование проводилось на соответствие НД) Адамға әсер ететін физикалық факторлардың гигиеналық нормативтерін бекіту туралы ҚР Ұлттық экономика министрінің 2015 жылғы 28 ақпандағы № 169 бұйрығы, Об утверждении Гигиенических нормативов к физическим факторам, оказывающим воздействие на человека Приказ Министра национальной экономики Республики Казахстан от 28 февраля 2015 года № 169

Зерттеу жүргізген адамның қолы, Т.А.Ә. (Ф.И.О., подпись лица, проводившего исследование)

Зерттеуші (лаборант) Балмуханова К.А.



Мөр орын  
Место печати

Мемлекеттік санитарлық-эпидемиологиялық сараптама орталығының басшысы (орынбасары)

Руководитель центра санитарно-эпидемиологической экспертизы (заместитель)

Мakat аудандық бөлімше басшысының у.м.а.

Т.А.Ә., қолы (Ф.И.О., подпись)

Г.Т.Ердыбаева

Хаттама 2 данада толтырылады (Протокол составляется в 2-х экземплярах)

Сынау нәтижелері тек қана сынауға түсірілген үлгілерге қолданылады/Результаты исследования распространяются только на образцы, подвергнутые испытанию

Рұқсатсыз хаттаманы жартылай қайта басуға ТЫЙЫМ САЛЫНҒАН/ Частичная перепечатка протокола без разрешения ЗАПРЕЩЕНА

#### Attachment No.4

##### Measurement results of atmospheric air Lot 7, Asphalt concrete plant km 510

Sampling points	Pollutants types (mg/m <sup>3</sup> )	Measurements before the commencement of construction works 4.06.18	Norm of MAC, mg/m <sup>3</sup>	September 24.09.18	November 9.11.18
Sanitary protection zone Border Point 1	Inorganic dust 70-20%	0.03	0,3	0,02	0,08
	Nitrogen dioxide	0,02	0,2	0,02	0,02
	Sulfur dioxide	0,01	0,5	0,01	0,01
	Carbon monoxide	0	5,0	0,6	0,7
	Formaldehyde	0,02	0,051	0,005	0,005
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0	1	0,02	0
	Hydrogen sulfide	0,005	0,008	0,003	0,003
Sanitary protection zone Border Downwind point 2	Inorganic dust 70-20%	0,03	0,3	0,07	0,02
	Nitrogen dioxide	0,02	0,2	0,02	0,02
	Sulfur dioxide	0,01	0,5	0,01	0,01
	Carbon monoxide	0,02	5,0	0,9	0,6
	Formaldehyde	0,02	0,051	0,005	0,005
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,005	1	0,02	0
	Hydrogen sulfide	0	0,008	0,003	0,003
Sanitary protection zone Border Downwind point 3	Inorganic dust 70-20%	0,03	0,3	0,02	0,02
	Nitrogen dioxide	0,02	0,2	0,02	0,02
	Sulfur dioxide	0,01	0,5	0,01	0,01
	Carbon monoxide	0	5,0	1,1	0,6
	Formaldehyde	0,02	0,051	0,005	0,005
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,005	1	0,04	0
	Hydrogen sulfide	0	0,008	0,003	0,003
Sanitary protection zone Border Downwind point 4	Inorganic dust 70-20%	0,03	0,3	0,09	0,02
	Nitrogen dioxide	0,02	0,2	0,02	0,02
	Sulfur dioxide	0,01	0,5	0,01	0,01
	Carbon monoxide	0	5,0	0,6	0,7
	Formaldehyde	0,02	0,051	0,005	0,005
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,005	1	0,03	0,02
	Hydrogen sulfide	0	0,008	0,003	0,003
Borrow pit No.2 km 491	Inorganic dust 70-20%	0,02	0,3	0,02	0,02
	Nitrogen dioxide	0,02	0,2	0,02	0,02
	Sulfur dioxide	0,01	0,5	0,01	0,01
	Carbon monoxide	0	5,0	0,6	0,6
	Formaldehyde	0,05	0,051	0,005	0,005
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,02	1	0,4	0
	Hydrogen sulfide	0	0,008	0,025	0,025
Constructed road Site beginning	Inorganic dust 70-20%	0,03	0,3	0,02	Not conducted
	Nitrogen dioxide	0,02	0,2	0,02	Not conducted


km 487	Sulfur dioxide	0,01	0,5	0,01	Not conducted
	Carbon monoxide	0	5,0	0,8	Not conducted
	Formaldehyde	0,02	0,051	0,005	Not conducted
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,005	1	0	Not conducted
	Hydrogen sulfide	0	0,008	0,003	Not conducted
Constructed road Middle of site km 500	Inorganic dust 70-20%	0,03	0,3	0,02	Not conducted
	Nitrogen dioxide	0,02	0,2	0,02	Not conducted
	Sulfur dioxide	0,01	0,5	0,01	Not conducted
	Carbon monoxide	0,02	5,0	0,7	Not conducted
	Formaldehyde	0,02	0,051	0,005	Not conducted
	Hydrocarbons C <sub>12</sub> -C <sub>19</sub>	0,005	1	0	Not conducted
	Hydrogen sulfide	0	0,008	0,003	Not conducted



## Attachment 4.1

### Protocols of laboratory researches on atmospheric air pollution

#### 1. Test reports of ACP



Испытательная лаборатория  
 ТОО «Аналитическая лаборатория по охране окружающей среды»  
 г. Атырау, Промышленная зона Оңтүстік-строя №22, тел/факс 459-361  
 E-mail: aloos@mail.online.kz  
 Аттестат аккредитации № КЗ.Т.06.0245 от «01» ноября 2018 г.

10П/ВЛ-22

**КЗ.Т.06.0245**

**ПРОТОКОЛ ИСПЫТАНИЙ № 381-33501/18**  
 от «19» 11 2018 г.

Всего листов 2  
Лист 1


Заявка № 335А  
 Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАИЙ АНОНИМ ШИРКЕТИ», г. Актау, Промышленная зона №9, здание 43.  
 Место отбора пробы: АБЗ  
 Дата отбора проб: 16.11.2018 г.  
 Наименование и обозначение пробы: атмосферный воздух.  
 Дата получения пробы: 16.11.2018 г. Дата(ы) проведения испытаний: 16.11-19.11.2018 г  
 НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктах».  
 НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4.  
 Условия проведения испытаний: температура 24,6°C, относительная влажность 74,0%.

Наименование определяемого показателя	НД на метод/методику испытаний, номер пункта	Единица измерений	ПДК м.р.	Фактическое значение			
				Идентификационный номер пробы / Наименование точки отбора (время отбора)			
				335А-1	335А-2	335А-3	335А-4
1	2	3	4	Граница СЗЗ Фон (14:52-15:12)	Граница СЗЗ подветренная сторона (15:19-15:39)	Граница СЗЗ подветренная сторона (15:45-16:05)	Граница СЗЗ подветренная сторона (16:10-16:30)
5	6	7	8				
<b>Метеорологические параметры</b>							
Температура воздуха	РД 52.04.186-89 разд. 4	°C	-	4,3	5,9	5,4	5,0
Атмосферное давление		мм рт.ст.	-	779	779	779	779
Направление ветра		градус	-	80	80	80	80
Скорость ветра		м/с	-	8,0	5,9	9,9	7,8
Влажность		%	-	31,0	29,0	39,0	35,0

Всего листов 2  
Лист 2

1	2	3	4	5	6	7	8
<b>Загрязняющие вещества</b>							
Углерода оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,7	0,6	0,6	0,7
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2.	мг/м³	0,5	<0,01	<0,01	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02	<0,02	<0,02
Сероводород (H₂S)	РД 52.04.186-89, п. 5.2.7.3	мг/м³	0,008	<0,003	<0,003	<0,003	<0,003
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	0,02	0,01	0,01	0,01
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	0,08	0,02	<0,02	<0,02
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005	<0,005	<0,005
Углеводороды C₁₂-C₁₉	МВИ -4215-007-56591409-2009	мг/м³	1,0	Не обнаружено	Не обнаружено	Не обнаружено	<0,02



Заведующий лабораторией \_\_\_\_\_  
 Ответственный за подготовку протокола: \_\_\_\_\_  
 И.о. начальника отдела хим. анализа атмосферного воздуха и радиологии \_\_\_\_\_  
 должность \_\_\_\_\_

подпись \_\_\_\_\_


подпись \_\_\_\_\_

Бисекенова А.С.  
Ф.И.О.

Култаева Т.С.  
Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию  
 Частичная перепечатка без разрешения лаборатории запрещается

Semi-annual Environmental Monitoring Report 07-12 2018  
 CAREC Corridors 1 and 6 Connector Road (Aktobe-Makat) Reconstruction Project  
 Road Section Km 330-504 / Contract 02-ADB/CSC-2017 (CSC-2)



**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 6П/И-1/ВР-19  
 КЗ.Т.06.0245      Аттестат аккредитации № КЗ.Т.06.0245 от «01» ноября 2018г

Акт  
 отбора проб атмосферного воздуха  
 для определения концентрации загрязняющих веществ

Заявка № 535А      Дата отбора 16.11.19

Наименование заказчика ТОО «АНТ ИНШААТ МАДЕН САНАЙЙ АНОНИМ ШИРКЕТИ»

Место отбора проб АБЗ

НД на отбор проб: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4 СТ РК 2.302-2014.

Точка отбора проб (производство, цех, наименование источника загрязнения)/ время отбора	Наименование загрязняющих веществ	Температура воздуха °С	Атмосферное давление, мм рт.ст.	Направление ветра, градус	Скорость ветра, м/с	Влажность, %
На границе СЗЗ Фон <u>14:52 - 15:12</u>	Метеопараметры Углерода оксид	4,5	779	80	8,0	31
Граница СЗЗ Подветренная сторона <u>15:12 - 15:33</u>	Диоксид серы Диоксид азота	5,9	779	80	5,9	29
Граница СЗЗ Подветренная сторона <u>15:35 - 16:05</u>	Сероводород Азота оксид	5,4	779	80	9,9	39
Граница СЗЗ Подветренная сторона <u>16:10 - 16:30</u>	Взвешенные вещества (пыль) Формальдегид Углеводороды C <sub>12</sub> -C <sub>19</sub>	5,0	779	80	7,8	35

Используемое оборудование: «МЭС-200А», компас, аспиратор «ПУ-4Э».  
 Газоанализаторы: «ГАНК-4», «ФГ-2».


Примечание \_\_\_\_\_

Отбор проб произвел (и) Исмаилов Т.      Алимов К.С.  
 должность      подпись      Ф.И.О.

Представитель заказчика Алимов К.С.      Алимов К.С.  
 должность      подпись      Ф.И.О.

Дата и время доставки: 16.11.20.30  
 в транспортировочной таре: 5-6  
 Принято (фамилия с инициалами, подпись): Исмаилов Т.


## 2. Test reports of construction road (2 points)

 KZ.T.06.0245	Испытательная лаборатория ТОО «Аналитическая лаборатория по охране окружающей среды» г. Атырау, Промышленная зона Оңтүстік строение №22, тел/факс 459-361 E-mail: aloos@mail.online.kz Аттестат аккредитации № KZ.T.06.0245 от «01» ноября 2018 г.		10П/ВП-22		
	ПРОТОКОЛ ИСПЫТАНИЙ № <u>382-335AH</u> от « <u>19</u> » <u>11</u> 2018 г.				
Заявка № 335А Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАИЙ АНОНИМ ШИРКЕТИ», г.Актау, Промышленная зона №9, здание 43. Место отбора пробы: на стр. дороги Дата отбора проб: 16.11.2018 г. Наименование и обозначение пробы: атмосферный воздух. Дата получения пробы: 16.11.2018 г.      Дата(ы) проведения испытаний: 16.11-19.11.2018 г. НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктах». НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4. Условия проведения испытаний: температура 24,6°С, относительная влажность 74%.					
Наименование определяемого показателя	НД на метод/методику испытаний, номер пункта	Единица измерений	ПДК м.р.	Фактическое значение	
				Идентификационный номер пробы / Наименование точки отбора (время отбора)	
				335А-5	335А-6
				Граница СЗЗ Фон (16:45-17:05)	Граница СЗЗ подветренная сторона (17:10-17:30)
1	2	3	4	5	6
Метеорологические параметры					
Температура воздуха	РД 52.04.186-89 разд. 4	°С	-	6,2	5,4
Атмосферное давление		мм рт.ст.	-	779	779
Направление ветра		градус	-	80	80
Скорость ветра		м/с	-	4,2	7,2
Влажность		%	-	29,0	29,0

Всего листов 2  
Лист 2

1	2	3	4	5	6
Загрязняющие вещества					
Углерода оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,8	0,7
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2.	мг/м³	0,5	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02
Сероводород (H₂S)	РД 52.04.186-89, п. 5.2.7.3	мг/м³	0,008	<0,003	<0,003
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	<0,03	<0,03
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	<0,02	<0,02
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005
Углеводороды C₁₂-C₁₉	МВИ -4215-007-56591409-2009	мг/м³	1,0	Не обнаружено	Не обнаружено



Заведующий лабораторией \_\_\_\_\_  
 подпись

Бисекенова А.С.  
 Ф.И.О.

Ответственный за подготовку протокола:  
 И.о. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии \_\_\_\_\_  
 должность

Култаева Т.С.  
 Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытания  
 Частичная перепечатка без разрешения лаборатории запрещается



Semi-annual Environmental Monitoring Report 07-12 2018  
 CAREC Corridors 1 and 6 Connector Road (Aktobe-Makat) Reconstruction Project  
 Road Section Km 330-504 / Contract 02-ADB/CSC-2017 (CSC-2)

**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**      6П/РИ-1/ВП-19

KZ.T.06.0245      Аттестат аккредитации № KZ.T.06.0245 от «01» ноября 2018г

Акт  
 отбора проб атмосферного воздуха  
 для определения концентрации загрязняющих веществ

Заявка № 3317      Дата отбора 16.11.18

Наименование заказчика ТОО «АНТ ИНШААТ МАДЕН САНАЙ АНОНИМ ШИРКЕТИ»

Место отбора проб участок строительства дороги

НД на отбор проб: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4 СТ РК 2.302-2014.

Точка отбора проб (производство, цех, наименование источника загрязнения)/ время отбора	Наименование загрязняющих веществ	Тем- пера- тура воздуха °C	Атмос- ферное давление, мм рт.ст.	Напра- вление ветра, градус	Скорость ветра, м/с	Влаж- ность, %
На границе СЗЗ Фон <u>16:45 - 17:05</u>	Метеопараметры Углерода оксид Диоксид серы Диоксид азота Азота оксид Взвешенные вещества (пыль)	6,2	779	80	4,2	29
Граница СЗЗ Подветренная сторона <u>17:10 - 17:30</u>	Формальдегид Углеводороды C <sub>12</sub> -C <sub>19</sub> Сероводород	5,7	779	80	7,2	29

Используемое оборудование: «МЭС-200А», компас, аспиратор «ПУ-4Э».  
 Газоанализаторы: «ГАНК-4», «ФГ-2».

Примечание \_\_\_\_\_

Отбор проб произвел (и) Алиханов Р.      Алиханов Р.      Алиханов Р.  
 должность      подпись      Ф.И.О.


Представитель заказчика Алиханов Т.К.      Алиханов Т.К.      Алиханов Т.К.  
 должность      подпись      Ф.И.О.

Дата и время доставки: 16.11.18 10:30

в транспортировочной таре: 54


Принято (фамилия с инициалами, подпись): Кулибаева А.      Али

### 3. Test reports of borrow pit No.2 (2points)

 <b>KZ.T.06.0245</b>	Испытательная лаборатория ТОО «Аналитическая лаборатория по охране окружающей среды» г. Атырау, Промышленная зона Оңтүстік строение №22, тел/факс 459-361 E-mail: aloos@mail.online.kz Аттестат аккредитации № KZ.T.06.0245 от «01» ноября 2018 г.		10П/ВП-22		
	ПРОТОКОЛ ИСПЫТАНИЙ № <u>383-335А/18</u> от « <u>19</u> » <u>11</u> 2018 г.				
Заявка № 335А Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАЙИ АНОНИМ ШИРКЕТИ»; г. Актау, Промышленная зона №9, здание 43. Место отбора пробы: карьер №2 Дата отбора проб: 16.11.2018 г. Наименование и обозначение пробы: атмосферный воздух. Дата получения пробы: 16.11.2018 г. Дата(ы) проведения испытаний: 16.11-19.11.2018 г. НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктах». НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4. Условия проведения испытаний: температура 24,6°C, относительная влажность 74,0%.					
Наименование определяемого показателя	НД на метод/методику испытаний, номер пункта	Единица измерений	ПДК м.р.	Фактическое значение	
				Идентификационный номер пробы / Наименование точки отбора (время отбора)	
				335А-7	335А-8
				Граница СЗЗ Фон (17:40-18:00)	Граница СЗЗ подветренная сторона (18:07-18:27)
1	2	3	4	5	6
Метеорологические параметры					
Температура воздуха	РД 52.04.186-89 разд. 4	°C	-	3,7	2,3
Атмосферное давление		мм рт.ст.	-	779	779
Направление ветра		градус	-	80	80
Скорость ветра		м/с	-	4,3	4,1
Влажность		%	-	31,0	35,0

Всего листов 2  
Лист 2

1	2	3	4	5	6
Загрязняющие вещества					
Углерода оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,6	0,7
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2.	мг/м³	0,5	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	<0,03	<0,03
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	<0,02	<0,02
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005
Углеводороды C₁₂-C₁₉	МВИ -4215-007-56591409-2009	мг/м³	1,0	Не обнаружено	Не обнаружено
Сажа	МВИ-4215-006-56591409-2009	мг/м³	0,15	<0,025	<0,025



М.П.

Заведующий лабораторией \_\_\_\_\_  
 подпись Бисекенова А.С.  
 Ответственный за подготовку протокола: \_\_\_\_\_  
 Ф.И.О.

И.о. начальника отдела хим. анализа \_\_\_\_\_  
 атмосферного воздуха и радиологии \_\_\_\_\_  
 должность Култаева Т.С.  
 подпись \_\_\_\_\_  
 Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию  
 Частичная перепечатка без разрешения лаборатории запрещается



Semi-annual Environmental Monitoring Report 07-12 2018  
 CAREC Corridors 1 and 6 Connector Road (Aktobe-Makat) Reconstruction Project  
 Road Section Km 330-504 / Contract 02-ADB/CSC-2017 (CSC-2)

**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 КЗ.Т.06.0245      Аттестат аккредитации № КЗ.Т.06.0245 от «01» ноября 2018г      6П/И-1/ВП-19

Акт  
 отбора проб атмосферного воздуха  
 для определения концентрации загрязняющих веществ

Заявка № 5250      Дата отбора 16.11.18

Наименование заказчика ТОО «АНТ ИНШААТ МАДЕН САНАИЙ АНОНИМ ШИРКЕТИ»

Место отбора проб Коррер 12

Ид на отбор проб: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4 СТ РК 2.302-2014.

Точка отбора проб (производство, цех, наименование источника загрязнения)/ время отбора	Наименование загрязняющих веществ	Тем- пера- тура воздуха °С	Атмос- ферное давление, мм рт.ст.	Напра- вление ветра, градус	Скорость ветра, м/с	Влаж- ность, %
На границе СЗЗ Фон <u>17:20 - 18:00</u>	Метеопараметры Углерода оксид Диоксид серы Диоксид азота Азота оксид Взвешенные вещества (пыль)	3,7	779	80	4,3	31
Граница СЗЗ Подветренная сторона <u>18:07 - 18:27</u>	Формальдегид Углеводороды C <sub>12</sub> -C <sub>19</sub> Сажа	2,3	779	80	4,1	35

Используемое оборудование: «МЭС-200А», компас, аспиратор «ПУ-49».  
 Газоанализаторы: «ГАНК-4», «ФГ-2».


Примечание \_\_\_\_\_

Отбор проб произвел (и) Султанов      Алиманов К.Г.  
 должность      подпись      Ф.И.О.

Представитель заказчика Алиманов К.Г.      Алиманов К.Г.  
 должность      подпись      Ф.И.О.

Дата и время доставки: 18.11.18, 20:30  
 в транспортировочной таре: 3+С  
 Принято (фамилия с инициалами, подпись): Исмаилов М      Али

#### 4. Test reports of ACP radiation (4 points)


 **Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Онгустик строение №22, тел/факс 459-361  
 E-mail: aloos@mail.online.kz  
 Аттестат аккредитации № КЗ.Т.06.0245 от «01» ноября 2018 г.


**ПРОТОКОЛ № 335P-118**  
 измерения мощности эквивалентной дозы  
 от «10» 11 2018 г.

Всего листов 1  
 Лист 1

Заявка № 335P  
 Заказчик, адрес: Фирма АО «АНТ ИНШААТ МАДЕН САНАИЙ АНОНИМ ШИРКЕТИ», г.Актау,  
 Промышленная зона №9, здание 43.  
 Место измерения: АЕЗ  
 Дата выполнения измерения: 16.11.2018 г.  
 Наименование и обозначение измерения: радиационный контроль.  
 Средство измерения (СИ): дозиметр-радиометр ДГУ-02У «Арбитр»  
 (сертификат о поверке №№ В.А.17-04-31153, действителен до «31» «07» 2019г.)  
 НД на метод/методику: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК №261  
 п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.  
 НД на продукцию: Санитарные правила «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №261 от 27.03.2015г. Гигиенические нормативы «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №155 от 27.02.2015г. «Санитарно-эпидемиологические требования к зданиям и сооружениям производственного назначения» №174 от 28.02.2015 г.

Идентификационный номер измерения	Наименование точки измерения	Измеренное значение мощности эквивалентной дозы мкЗв/час	Допустимый предел, мкЗв/час	Фоновое значение, мкЗв/час
1	2	3	4	5
335P-1	Точка №1	0,074	0,3	0,080
335P-2	Точка №2	0,086	0,3	0,080
335P-3	Точка №3	0,080	0,3	0,080
335P-4	Точка №4	0,090	0,3	0,080

Заведующий лабораторией  Бисекенова А.С.  
 М.П. подпись Ф.И.О.

Ответственный за подготовку протокола:  
 И.О. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии  Култаева Т.С.  
 должность подпись Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию.  
 Частичная перепечатка без разрешения лаборатории запрещается.

**Испытательная лаборатория**  
 ТОО «Аналитическая лаборатория по охране окружающей среды»  
 4П/ТР-1  
 КЗ.Т.06.0245  
 Аттестат аккредитации № КЗ.Т.01.0245 от «01» ноября 2018г.

Акт  
 измерения мощности эквивалентной дозы  
 от «16» «11» 2018г.


Исполнитель: ООО «АКТИВ» МАКАТ-СТАЦИИ АКОЛИМ ШИРДЭТ  
 (наименование заказчика)  
 Место измерения: АБЗ

НД на метод/методика: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК 261, п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.

Идентификационный номер	Точка отбора проб	Измеренное значение мкЗв/час	
	Фоновое измерение	1. 0,060 2. 0,080 3. 0,090 4. 0,090 5. 0,080	Среднее из 5 измерений 0,080
ЗЗП-1	Рыба № 1	1. 0,080 2. 0,080 3. 0,080 4. 0,080 5. 0,080	Среднее из 5 измерений 0,080
ЗЗП-2	Рыба № 2	1. 0,080 2. 0,080 3. 0,080 4. 0,080 5. 0,080	Среднее из 5 измерений 0,080
ЗЗП-3	Рыба № 3	1. 0,080 2. 0,080 3. 0,080 4. 0,080 5. 0,080	Среднее из 5 измерений 0,080
ЗЗП-4	Рыба № 4	1. 0,080 2. 0,080 3. 0,080 4. 0,080 5. 0,080	Среднее из 5 измерений 0,080

Используемое оборудование: Дозиметр ДКС-02У «Арбитр»

Измерения произвел: Исмаилов Т.С. (подпись)  
 Представитель предприятия: Жапаров Т.С. (подпись)  
 (должность) (должность)



**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Оңтүстік стреление №22, тел/факс 459-361  
 E-mail: aloos@mail.online.kz  
 Аттестат аккредитации № KZ.T.06.0245 от «01» ноября 2018 г.

**KZ.T.06.0245**

7ПТР-1

**ПРОТОКОЛ № 385-335P/1+**  
 измерения мощности эквивалентной дозы  
 от «19» 11 2018 г.

Всего листов 1  
 Лист 1

Заявка № 335P  
 Заказчик, адрес: Филиал АО «АНТ ИНШЛАТ МАДЕН САНАЙЙ АНОНИМ ШИРКЕТИ», г.Актау,  
 Промышленная зона №9, здание 43.  
 Место измерения: Карьер №2.  
 Дата выполнения измерения: 16.11.2018 г.  
 Наименование и обозначение измерения: радиационный контроль.  
 Средство измерения (СИ): дозиметр-радиометр ДГУ-02У «Арбитр»  
 (сертификат о поверке №№ В.А.17-04-31153, действителен до «31» «07» 2019г.)  
 НД на метод/методику: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ИП РК №261  
 п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.  
 НД на продукцию: Санитарные правила «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №261 от 27.03.2015г. Гигиенические нормативы «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №155 от 27.02.2015г. «Санитарно-эпидемиологические требования к зданиям и сооружениям производственного назначения» №174 от 28.02.2015 г.

Идентификационный номер измерения	Наименование точки измерения	Измеренное значение мощности эквивалентной дозы мкЗв/час	Допустимый предел, мкЗв/час	Фоновое значение, мкЗв/час
1	2	3	4	5
335P-5	Точка №1	0,092	0,3	0,088
335P-6	Точка №2	0,090	0,3	0,088

Заведующий лабораторией \_\_\_\_\_  
 М.П. \_\_\_\_\_  
 Ответственный за подготовку протокола:  
 И.о. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии  
 должность \_\_\_\_\_

\_\_\_\_\_ Бисекенова А.С.  
 подпись \_\_\_\_\_ Ф.И.О.  
 \_\_\_\_\_ Кутышева Т.С.  
 подпись \_\_\_\_\_ Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию  
 Частичная перепечатка без разрешения лаборатории запрещается

**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»** 4П/ТР-1  
 КЗ.Т.06.0245 Аттестат аккредитации № КЗ.Т.01.0245 от «01» ноября 2018г

Акт  
 измерения мощности эквивалентной дозы  
 от «16» в «11» 2018 г.

ТОО «АКТИВИАТ НАРЕН СНАЙС АКОШМА ИШАКЕРГЕ»  
 (наименование заказчика)  
 Место измерения Керей-2

НД на метод/методика: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК 261, п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.


Идентификационный номер	Точка отбора проб	Измеренное значение мкЗв/час	
	Фоновое измерение	1. 0,080 2. 0,080 3. 0,080 4. 0,080 5. 0,080	Среднее из 5 измерений 0,081
ЗСТР-5	Яма №1	1. 0,080 2. 0,080 3. 0,080 4. 0,120 5. 0,130	Среднее из 5 измерений 0,092
ЗСТР-6	Яма №2	1. 0,100 2. 0,080 3. 0,080 4. 0,080 5. 0,100	Среднее из 5 измерений 0,080
		1. 2. 3. 4. 5.	Среднее из 5 измерений
		1. 2. 3. 4. 5.	Среднее из 5 измерений

Используемое оборудование: Дозиметр ДКГ-02У «Арбитр»

Измерения произвел Исмаилов Исмаилов  
 должность подпись Ф.И.О.  
 Представитель предприятия Жадыр Жадыр  
 должность подпись Ф.И.О.

**4.1. Test reports of borrow pit No.2 radiation (2 points)**

**6. Test reports of ACP**



**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Олутүстік стрөне №22, тел/факс 459-361  
 E-mail: aloos@mail.online.kz  
 Аттестат аккредитации № КЗ.И.06.0245 от «06» ноября 2013г

**КЗ.И.06.0245**


7П/ТР-1

**ПРОТОКОЛ № 297 - 244 P/14**  
 измерения мощности эквивалентной дозы  
 от «06» 09 2014 г.

Всего листов 1  
 Лист 1

Заявка № 274Р  
 Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАЙЙ АНОНИМ ШИРКЕТИ», г.Актау, Промышленная зона №9, здание 43.  
 Место измерения: АБЗ  
 Дата выполнения измерения: 24.09.2018 г.  
 Наименование и обозначение измерения: радиационный контроль.  
 Средство измерения (СИ): дозиметр-радиометр ДГУ-02У «Арбитр»  
 (сертификат о поверке №№ ВА.17-04-31153, действителен до «31» «07» 2019 г.)  
 НД на метод/методику: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК №261 п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.  
 НД на продукцию: Санитарные правила «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №261 от 27.03.2015г. Гигиенические нормативы «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №155 от 27.02.2015г. «Санитарно-эпидемиологические требования к зданиям и сооружениям производственного назначения» №174 от 28.02.2015 г.

Идентификационный номер измерения	Наименование точки измерения	Измеренное значение мощности эквивалентной дозы мкЗв/час	Допустимый предел, мкЗв/час	Фоновое значение, мкЗв/час
1	2	3	4	5
274Р-1	Точка №1	0,096	0,3	0,079
274Р-2	Точка №2	0,102	0,3	0,079
274Р-3	Точка №3	0,118	0,3	0,079
274Р-4	Точка №4	0,105	0,3	0,079



М.П.

Заведующий лабораторией \_\_\_\_\_  
 подпись

Бисекенова А.С.  
 Ф.И.О.


Ответственный за подготовку протокола:  
 И.о. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии  
 должность

\_\_\_\_\_  
 подпись

Култаева Т.С.  
 Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытаниям  
 Частичная перепечатка без разрешения лаборатории запрещается.





Испытательная лаборатория  
 ТОО «Аналитическая лаборатория по охране окружающей среды»

Аттестат аккредитации № KZ.H.06.0245 от «06» ноября 2013г

4П/ТР-1

Акт  
 измерения мощности эквивалентной дозы  
 от «24» 09 2018 г.

(наименование заказчика)  
 ТОО «Актон Логистикс»

Место измерения: РБЗ

НД на метод/методику: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК 261, п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.

Идентификационный номер	Точка отбора проб	Измеренное значение мкЗв/час	
	Фоновое измерение	1. 0,069 2. 0,071 3. 0,072 4. 0,065 5. 0,092	Среднее из 5 измерений 0,079
274Р-1	Точка 1	1. 0,100 2. 0,097 3. 0,082 4. 0,099 5. 0,101	Среднее из 5 измерений 0,096
274Р-2	Точка 2	1. 0,082 2. 0,095 3. 0,104 4. 0,112 5. 0,115	Среднее из 5 измерений 0,102
274Р-3	Точка 3	1. 0,112 2. 0,120 3. 0,114 4. 0,118 5. 0,120	Среднее из 5 измерений 0,118
274Р-4	Точка 4	1. 0,110 2. 0,094 3. 0,099 4. 0,110 5. 0,112	Среднее из 5 измерений 0,105

Используемое оборудование: ДРГ-024 Арбис

Измерения произвел: Специалист (подпись) Докенов М (Ф.И.О.)

Представитель предприятия: \_\_\_\_\_ (подпись) \_\_\_\_\_ (Ф.И.О.)



Испытательная лаборатория  
 ТОО «Аналитическая лаборатория по охране окружающей среды»  
 г. Актау, Промышленная зона Оңтүстік-строение №22, телефон: 459-361  
 E-mail: alos@mail.online.kz  
 Аттестат аккредитации № KZ.И.06.0245 от «06» ноября 2013г

ИМВН-21

ПРОТОКОЛ ИСПЫТАНИЙ № 894 - 274A114  
 от «06» 09 2018 г.

Всего листов 2  
 Лист 1

Заявка № 274A

Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАЛИЙ АНОНИМ ШИРЯЕТИ», г. Актау, Промышленная зона №9, здание 43.

Место отбора проб: АБЗ

Дата отбора проб: 24.09.2018 г.

Наименование и обозначение проб: атмосферный воздух.

Дата получения проб: 24.09.2018 г.

Дата(ы) проведения испытаний: 24.09.25.09.2018 г

НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктах».

НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4.

Условия проведения испытаний: температура 24,0°С, относительная влажность 74,0%.

Наименование определяемого показателя	НД на метод/ методику испытаний, номер пути	Единица измерений	ЦДК м.р.	Фактическое значение			
				Идентификационный номер пробы / Наименование точки отбора (время отбора)			
				274A-1	274A-2	274A-3	274A-4
				Граница СЗЗ Фон (14:24-14:44)	Граница СЗЗ подветренная сторона (14:46-15:06)	Граница СЗЗ подветренная сторона (15:08-15:28)	Граница СЗЗ подветренная сторона (15:30-15:50)
1	2	3	4	5	6	7	8
Метеорологические параметры							
Температура воздуха	РД 52.04.186-89 разд. 4	°С	-	25,2	25,3	25,1	25,1
Атмосферное давление		мм рт.ст.	-	762	762	762	762
Направление ветра		градус	-	200	200	200	200
Скорость ветра		м/с	-	2,2	1,7	2,4	2,8
Влажность		%	-	31,0	30,0	30,0	31,0

Всего листов 2  
 Лист 2

1	2	3	4	5	6	7	8
Загрязняющие вещества							
Углерод оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,6	0,9	1,1	0,6
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2	мг/м³	0,5	<0,01	<0,01	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02	<0,02	<0,02
Сероводород (H₂S)	РД 52.04.186-89, п. 5.2.7.3	мг/м³	0,008	<0,003	<0,003	<0,003	<0,003
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	0,08	0,06	0,05	0,03
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	<0,02	0,07	<0,02	0,09
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005	<0,005	<0,005
Углеводороды C₁₂-C₁₈	МВИ-4215-007-56591409-2009	мг/м³	1,0	0,02	0,02	0,04	0,03



Заведующий лабораторией

*Handwritten signature*

Блескенова А.С.

подпись

Ф.И.О.

Статистический за подготовку протокола:

И.О. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии

*Handwritten signature*


Кулмиев Т.С.

Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию

Частицы переноса без разрешения лаборатории запрещены

## 6.1. Test reports of construction road (2 points)

 **Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»** БП/И-1/ВП-19  
 КЗ.И.06.0245 Аттестат аккредитации № КЗ.И.06.0245 от «06» ноября 2013г

Акт  
 отбора проб атмосферного воздуха  
 для определения концентрации загрязняющих веществ

Заявка № 224 А Дата отбора 24.09.2018

Наименование заказчика ТОО «АНТ ИНШААТ МАДЕН САНАЙ АНОНИМ ШІРКЕТІ»

Место отбора проб С/ф дороги

НД на отбор проб: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4 СТ РК 2.302-2014.

Точка отбора проб (производство, псх, наименование источника загрязнения)/ время отбора	Наименование загрязняющих веществ	Температура воздуха °С	Атмосферное давление, мм рт.ст.	Направление ветра, градус	Скорость ветра, м/с	Влажность, %
На границе СЗЗ Фон <u>15:55-16:15</u>	Метеопараметры Углерода оксид Диоксид серы Диоксид азота Азота оксид Взвешенные вещества (пыль)	<u>25</u>	<u>762</u>	<u>200</u>	<u>6,8</u>	<u>32</u>
Граница СЗЗ Подветренная сторона <u>16:20-16:40</u>	Формальдегид Углеводороды C <sub>12</sub> -C <sub>19</sub> Сероводород	<u>24,1</u>	<u>762</u>	<u>200</u>	<u>4,9</u>	<u>33</u>

Используемое оборудование: «МЭС-200А», компас, аспиратор «ПУ-4Э».  
 Газоанализаторы: «ГАНК-4», «ФГ-2».

Примечание

Отбор проб произвел (и) Ахметов Б. Дакенова М.  
 должность подпись Ф.И.О.  
 Представитель заказчика Ахметов Б. Дакенова М.  
 должность подпись Ф.И.О.

Дата и время доставки: 24.09.18  
 в транспортировочной таре: 4°C  
 Принято (фамилия с инициалами, подпись): Ахметов Б. А. Ахметов

  
**KZ.И.06.0245**

**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Оңтүстік-строяние №22, тел/факс 459-361  
 E- mail: aloos@mail.online.kz  
 Аттестат аккредитации № KZ.И.06.0245 от «06» ноября 2013г

**101/ВП-22**

**ПРОТОКОЛ ИСПЫТАНИЙ № 295-274А/18**  
 от «26» 09 2018 г.

Всего листов 2  
 Лист 1

Заявка № 274А  
 Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАИЙ АНОНИМ ШИРКЕТИ», г.Актау, Промышленная зона №9, здание 43.  
 Место отбора пробы: на стр. дороги  
 Дата отбора проб: 24.09.2018 г.  
 Наименование и обозначение пробы: атмосферный воздух.  
 Дата получения пробы: 24.09.2018 г.      Дата(ы) проведения испытаний: 24.09-25.09.2018 г  
 НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктов».  
 НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4.  
 Условия проведения испытаний: температура 24,0°С, относительная влажность 74%.

Наименование определяемого показателя	НД на метод/методику испытаний, номер пункта	Единица измерений	ПДК м.р.	Фактическое значение	
				Идентификационный номер пробы / Наименование точки отбора (время отбора)	
				274А-5	217А-6
				Граница СЗЗ Фон (15:55-16:15)	Граница СЗЗ подветренная сторона (16:20-16:40)
1	2	3	4	5	6
<b>Метеорологические параметры</b>					
Температура воздуха	РД 52.04.186-89 разд. 4	°С	-	25,0	24,1
Атмосферное давление		мм рт.ст.	-	762	762,0
Направление ветра		градус	-	200	200
Скорость ветра		м/с	-	6,8	4,9
Влажность		%	-	32,0	33,0



Всего листов 2  
 Лист 2

1	2	3	4	5	6	7	8
Загрязняющие вещества							
Углерода оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,6	0,9	1,1	0,6
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2.	мг/м³	0,5	<0,01	<0,01	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02	<0,02	<0,02
Сероводород (H₂S)	РД 52.04.186-89, п. 5.2.7.3	мг/м³	0,008	<0,003	<0,003	<0,003	<0,003
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	0,08	0,06	0,05	0,03
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	<0,02	0,07	<0,02	0,09
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005	<0,005	<0,005
Углеводороды C₁₂-C₁₉	МВИ -4215-007-56591409-2009	мг/м³	1,0	0,02	0,02	0,04	0,03



Заведующий лабораторией

подпись

Бисекенова А.С.

Ф.И.О.

Ответственный за подготовку протокола:

И.о. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии  
 должность

подпись

Кулбаева Т.С.

Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытанию  
 Частичная перепечатка без разрешения лаборатории запрещается



**KZ.И.06.0245**

Испытательная лаборатория  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Оңтүстік строние №22, тел/факс 459-361  
 E-mail: akos@mail.online.kz  
 Аттестат аккредитации № KZ.И.06.0245 от «06» ноября 2013г

**ДПТР-1**

**ПРОТОКОЛ № 228-274P/18**  
 измерения мощности эквивалентной дозы  
 от «26» 09 2018 г.

Всего листов 1  
 Лист 1

Заявка № 274P  
 Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАЙИ АНОНИМ ШИРКЕТИ», г.Актау,  
 Промышленная зона №9, здание 43.  
 Место измерения: Карьер №2.  
 Дата выполнения измерения: 24.09.2018 г.  
 Наименование и обозначение измерения: радиационный контроль.  
 Средство измерения (СИ): дозиметр-радиометр ДГУ-02У «Арбитр»  
 (сертификат о поверке №№ ВА.17-04-31153, действителен до «31» «07» 2019 г.)  
 НД на метод/методику: СТ РК ИСО 18589-1-2010, ГОСТ 25935-83, ГОСТ 28271-89, ПП РК №261  
 п.11, п.12, п.13, Приказ №194 от 08.09.2011 г.  
 НД на продукцию: Санитарные правила «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №261 от 27.03.2015г. Гигиенические нормативы «Санитарно-эпидемиологические требования к обеспечению радиационной безопасности» №155 от 27.02.2015г. «Санитарно-эпидемиологические требования к зданиям и сооружениям производственного назначения» №174 от 28.02.2015 г.

Идентификационный номер измерения	Наименование точки измерения	Измеренное значение мощности эквивалентной дозы мкЗв/час	Допустимый предел, мкЗв/час	Фоновое значение, мкЗв/час
1	2	3	4	5
274P-5	Точка №1	0,108	0,3	0,079
274P-6	Точка №2	0,116	0,3	0,079



Заведующий лабораторией \_\_\_\_\_  
 подпись

Бисекенова А.С.  
 Ф.И.О.

Ответственный за подготовку протокола:  
 И.О. начальника отдела хим. анализа  
 атмосферного воздуха и радиостанции  
 должность \_\_\_\_\_  
 подпись

Кулдаева Т.С.  
 Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытаниям.  
 Частичная перепечатка без разрешения лаборатории запрещается.



**Испытательная лаборатория**  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 6П/РМ-УВП-19  
 КЗ.Н.06.0245  
 Аттестат аккредитации № КЗ.Н.06.0245 от «06» ноября 2013г

**Акт**  
 отбора проб атмосферного воздуха  
 для определения концентрации загрязняющих веществ

Заявка № 224 А Дата отбора 24 09 2018

Наименование заказчика ТОО «АНТ ИНИШАТ МАДЕН САНАЙ АНОНИМ ШИРКЕТИ»

Место отбора проб Коридор N 2

НД на отбор проб: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4 СТ РК 2.302-2014.


Точка отбора проб (производство, цех, наименование источника загрязнения)/ время отбора	Наименование загрязняющих веществ	Температура воздуха °С	Атмосферное давление, мм рт.ст.	Направление ветра, градус	Скорость ветра, м/с	Влажность, %
На границе СЗЗ Фон	Метеопараметры Углерода оксид Диоксид серы Диоксид азота Азота оксид Взвешенные вещества (пыль)	24,9	762	200	4,5	32
Граница СЗЗ Подветренная сторона	Формальдегид Углеводороды C <sub>12</sub> -C <sub>14</sub> Сажа	25,0	762	200	3,8	32

Используемое оборудование: «МЭС-200А», компас, аспиратор «ПУ-4Э».  
 Газоанализаторы: «ГАНК-4», «ФГ-2».

Примечание:

Отбор проб произвел (и) Спачуаши Бисекешев Т.  
 должность подпись Ф.И.О.  
 П.р.елставитель заказчика Экватор Аманжол Аманжол  
 должность подпись Ф.И.О.

Дата и время доставки: 24 09 18  
 в транспортировочной таре: 4°С  
 Принято (фамилия с инициалами, подпись): Аманжол А.А. Аманжол

  
 КЗ.Н.06.0245

Исследовательская лаборатория  
 ТОО «Аналитическая лаборатория по охране окружающей среды»  
 4П/ТР-1  
 Аттестат аккредитации № КЗ.Н.06.0245 от 06.09.2013г.

Акт  
 измерения мощности эквивалентной дозы  
 от «24» 09 2018 г.

ТОО «Ано Чинисай Ререн Санайи Инжиниринг»  
 (наименование заказчика)  
 Место измерения корнер №2

ИД на метод/модель: СР.К.К.0.17.01.1-2010.К.С.5435-13.К.С.2221-13.Т.П.Р.261.В.Н.Б.14.П.13.П.14.С.194.С.19.09.10.12

Идентификационный номер	Точка отбора проб	Измеренное значение мкЗв/час	
	Фоновое измерение	1. 0,054 2. 0,061 3. 0,063 4. 0,070 5. 0,092	Среднее из 5 измерений 0,079
224P 5	Точка 1	1. 0,094 2. 0,100 3. 0,112 4. 0,114 5. 0,115	Среднее из 5 измерений 0,108
224P 6	Точка 2	1. 0,110 2. 0,118 3. 0,119 4. 0,110 5. 0,124	Среднее из 5 измерений 0,116

Используемое оборудование:

Измерения произвел Степанов Д. Д. Давыдов  
 должность подпись Ф.И.О.

Представитель предприятия Степанов Д. Д. Давыдов Г.К.  
 должность подпись Ф.И.О.

**6.2. Test reports of borrow pit No.2 (2 points)**



KZ.И.06.0245

Испытательная лаборатория  
**ТОО «Аналитическая лаборатория по охране окружающей среды»**  
 г. Атырау, Промышленная зона Оңтүстік строение №22, тел/факс 459-361  
 E-mail: aloos@mail.online.kz  
 Аттестат аккредитации № KZ.И.06.0245 от «06» ноября 2013г

10П/ВП-22

**ПРОТОКОЛ ИСПЫТАНИЙ № 286-274A/1A**  
 от « 26 » 09 2018 г.

Всего листов 2  
 Лист 1

Заявка № 274A

Заказчик, адрес: Филиал АО «АНТ ИНШААТ МАДЕН САНАЙЙ АНОНИМ ШИРКЕТІ», г.Актау, Промышленная зона №9, здание 43.

Место отбора пробы: карьер №2

Дата отбора проб: 24.09.2018 г.

Наименование и обозначение пробы: атмосферный воздух.

Дата получения пробы: 24.09.2018 г.

Дата(ы) проведения испытаний: 24.09-25.09.2018 г

НД на продукцию: Гигиенические нормативы «Гигиенические нормативы к атмосферному воздуху в городских и сельских населенных пунктах».

НД на отбор: ГОСТ 17.2.3.01-86, ГОСТ 17.2.6.01-86, ГОСТ 17.2.6.02-85, РД 52.04.186-89, разд. 4.

Условия проведения испытаний: температура 24,0°C, относительная влажность 74,0%.

Наименование определяемого показателя	НД на метод/методику испытаний, номер пункта	Единица измерений	ПДК м.р.	Фактическое значение	
				Идентификационный номер пробы / Наименование точки отбора (время отбора)	
				274A-7	274A-8
1	2	3	4	Граница СЗЗ Фон (16:50-17:10)	Граница СЗЗ подветренная сторона (17:15-17:35)
5	6	Метеорологические параметры			
Температура воздуха	РД 52.04.186-89 разд. 4	°C	-	24,9	25,0
Атмосферное давление		мм рт.ст.	-	762	762
Направление ветра		градус	-	200	200
Скорость ветра		м/с	-	4,5	3,8
Влажность		%	-	32,0	32,0

Всего листов 2  
 Лист 2

1	2	3	4	5	6
Загрязняющие вещества					
Углерода оксид (CO)	СТ РК 2.302-2014	мг/м³	5,0	0,6	0,6
Диоксид серы (SO₂)	РД 52.04.186-89 п.5.2.7.2.	мг/м³	0,5	<0,01	<0,01
Диоксид азота (NO₂)	РД 52.04.186-89 п.5.2.1.3.	мг/м³	0,2	<0,02	<0,02
Азота оксид (NO)	СТ РК 2.302-2014	мг/м³	0,4	0,05	<0,03
Взвешенные вещества (пыль)	МВИ-4215-006-56591409-2009	мг/м³	0,5	<0,02	0,09
Формальдегид (CH₂O)	СТ РК 2.302-2014	мг/м³	0,05	<0,005	<0,005
Углеводороды C₁₂-C₁₉	МВИ -4215-007-56591409-2009	мг/м³	1,0	0,4	0,02
Сажа	МВИ-4215-006-56591409-2009	мг/м³	0,15	<0,025	<0,025



Заведующий лабораторией

*ТМ*  
 подпись

Биссеннова А.С.  
 Ф.И.О.

Ответственный за подготовку протокола:

И.о. начальника отдела хим. анализа  
 атмосферного воздуха и радиологии  
 должность

*Култаева*  
 подпись

Култаева Т.С.  
 Ф.И.О.

Результаты протокола распространяются только на образцы, подвергнутые испытаниям  
 Частичная перепечатка без разрешения лаборатории запрещается



## Attachment No.5

### Site photos



During consultation with Contractors Lot of 4, 5 and 6 regarding the EMP development and completion - September, 2018



Lot 6 Material stockpiling. Dead-end km 437,  
November 2018



Lot 6 Containers delivery for base camp, km 435,  
November 2018



Lot 6 Base camp, km 435



Lot 6 Laboratory construction, km 435,  
November 2018



Lot 6 Base camp fencing, km 435,  
November 2018



Lot 6 Pipe laying for sewage at base camp, km 435,  
November 2018



Lot 6 Top soil removal and road levelling  
PK 20+00 – PK 30+00



Lot 6 Top soil removal PK 0+00 – PK 10+00





Safety signs at entrance of base camp Lot 7



Directional sign for Borrow pit No.3 at PK 131+00 Lot 7



**Project sign board Lot 7 km 487**

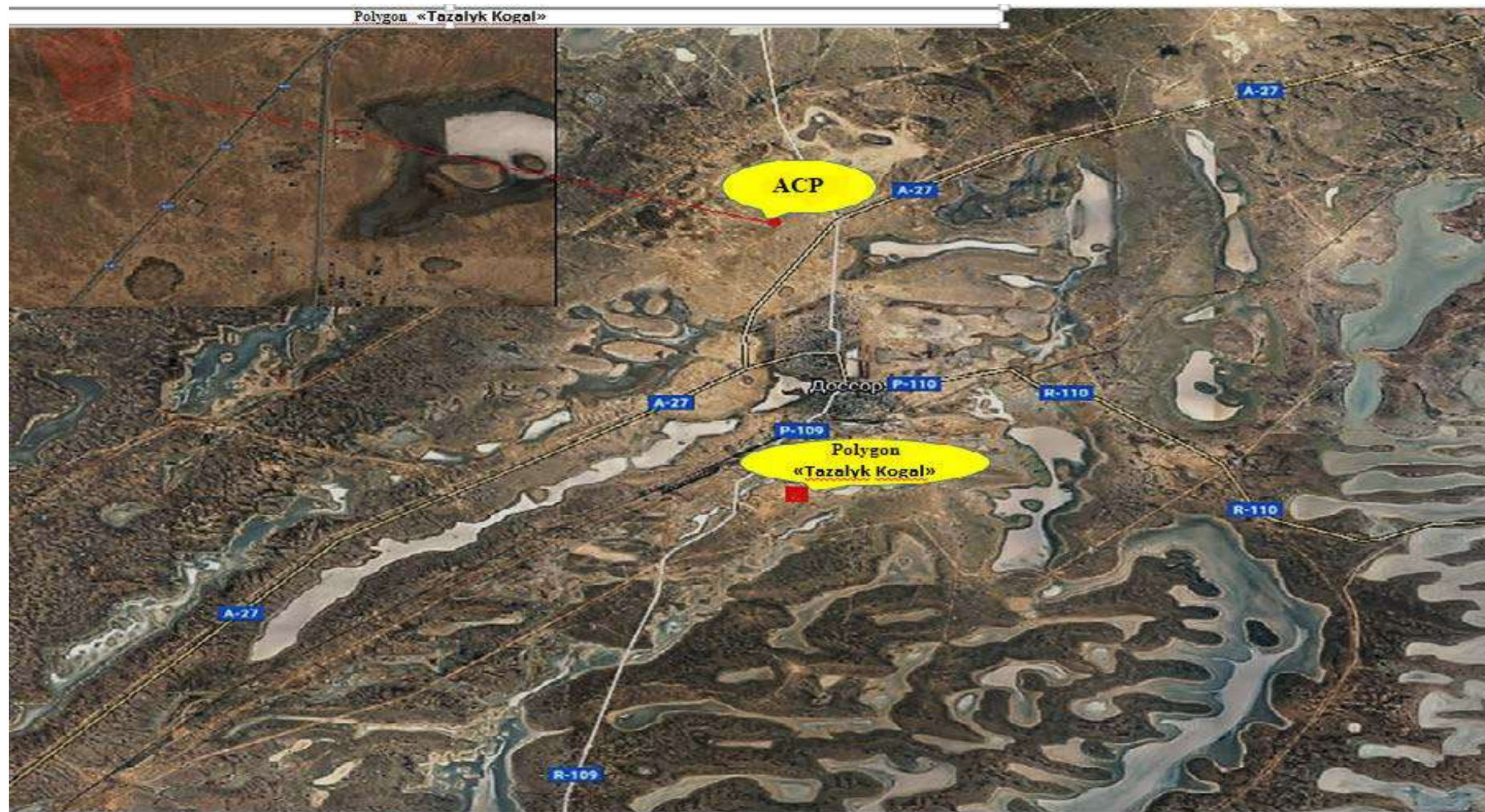


**Fire-fighting board at base camp - Lot 7, km 510, November 2018**



**Shelf with medicines in medical facility at base camp - Lot 7, km 510, November 2018**





Special polygon for solid household waste removal, Dossor village - Lot 7 (at 7 km)

## Ecologic Monitoring Check sheet

Site Monitoring Check sheet		
<b>The site visited on:</b> 5.07.2018  <b>Time:</b> 10:00	<b>Engineer representative:</b> Environment Protection Specialist Imbarova S.E  <b>Contractor representative:</b> Gulzhanat – Ecologist	Engineer's ref # -----  Contractor's ref #
Weather conditions: clear, +38C, south-east wind 5 m/sec.		
The work being done at the moment:	Milling of an existing layer, soil compaction, asphalt-concrete laying, and constructing artificial structures at Lot 7	
Problems related to environment	Potential causes	Measures suggested for risk mitigation
Too much dust along the road.	Hot weather conditions and soil characteristics, and insufficient water sprinkling could be the cause.	To increase the number of water tankers and to intensify water sprinkling close to populated areas.
Low quality bypass roads.	Insufficient work crew to maintain the bypass road or low supervision by Contractor.	To increase the number of water tankers and to intensify water sprinkling close to populated areas.
Ecologic audit done by: Imbarova S.E		Contractor representative: Gulzhanat Tashimova

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
Contractor's Base Camp						
1	Septic tanks are installed and cleaned corresponding to approved procedures.	✓				
2	All effluents flow to septic tanks or utility water tanks	✓		✓		
3	All hazardous liquids are collected at non-permeable facilities	✓		✓		Concrete ponds built and fenced.

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
4	Solid and hazard materials are kept at safe work sites	✓		✓		Concrete sites built and fenced per requirements to keep hazardous materials.
5	Effluents are collected in drain system and disposed by Contractor	✓		✓		
6	All vehicles drive in and out the Base/Camp are searched.	✓		✓		
7	The workers and other means keep local community and organizations informed about any construction and noisy activities planned.	✓		✓		The Contractor attends the meetings at Dossor and Makat and informs Akimat and the public about planned construction stages
8	Open material storage containers are covered by canvas.	✓		✓		Oil waste tanks at construction sites are put into closed containers for further disposal
9	Open fire is prohibited	✓		✓		No open fire observed neither on site nor on Base/Camp
10	Firefighting equipment <ul style="list-style-type: none"> <li>▪ Sand bucket and shovel</li> <li>▪ Foam fire extinguisher</li> <li>▪ Protective coating in canteen</li> </ul>	✓		✓		
11	Fencing and security guards keep the Base/Camp safe from strangers	✓		✓		Security guard is allotted and Post installed at Base/Camp entrance
12	Personal Protective Equipment (PPE) is provided to all labor.	✓		✓		
13	Smoking is prohibited except for smoke shacks	✓		✓		Smoke shacks are built
14	Appropriate traffic signs installed at unsafe areas and warning signs on site	✓		✓		Traffic Safe Rules are met.
15	Potable water is provided by businessmen and license holders to all labor.	✓		✓		
16	Labor coveralls are washed daily		✓			Labor coveralls are washed on requirement
17	All labor are catered three times a day	✓				Local residents have lunch only as they do not work on rotation. It does



No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
						not breach RoK Labor Code.
18	Canteen at Camp with sanitary conditions	✓				
19	Clinic and First aid kit at the Camp and worksite	✓		✓		Supplies made for First aid kits when required. Clinic visit logbook is maintained.
20	Camp doctor maintains all labor healthy, corresponding care given, examinations done once a month	✓		✓		Pre-work check-up done by Clinic daily and daily examination logbook maintained (alcotest, blood pressure check, etc.).
21	All the area is kept clean. No wastes on the area, except for those intended for disposal	✓		✓		
22	Camp recreation areas	✓				Camp recreation areas are arranged.
23	Child labor (15 years old and younger)		✓			Not observed
<b>Work site</b>						
1	Liquid wastes from Asphalt Plant are stored in a tank and disposed by vacuum truck	✓		✓		
2	Solid wastes from Asphalt Plant are stored and disposed per approved procedures	✓		✓		
3	Gravel is applied at Asphalt Plant to reduce the dust	✓		✓		
4	Plant area is water sprinkled to reduce the dust	✓		✓		Done by dust suppression schedule and depending on weather conditions. Dust suppression is multiplied when windy.
5	The Plant cannot produce the effluents to any area. Impermeable concrete ponds will be built for it.	✓		✓		
6	Masks are provided to all Asphalt Plant and Concrete Plant labor	✓		✓		
7	All Asphalt Plant and Concrete Plant labor don protective masks	✓		✓		



No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
8	Sand and crushed stone for concrete and asphalt are kept at wet area	✓		✓		
9	Asphalt Plant is equipped with Firefighting means.	✓		✓		
10	High vibrating Plant or equipment are built, maintained and operated right.	✓		✓		
<b>Fuel station</b>						
1	Oil filling will be strictly controlled and is permitted only at the fuel station and on workshop area	✓		✓		It is necessary to concrete fuel station area
2	Fuel tank storage area is fenced and it an impervious and roof is closed		✓	✓		There is no fencing and not installed warning signs
3	Fuel station, which provided with firefighting equipment, is checked weekly	✓		✓		Regularly control of fire extinguisher's validity
4	There is a warning signs at fuel station		✓		✓	
5	Fuel station provided with wastebasket	✓				
<b>Contractor's Workshop and Car Wash</b>						
1	Liquid hazardous materials are stored in designated area at the workshop	✓		✓		It is necessary to organize special concreted areas for storage of hazardous materials and to install a fence
2	Solid hazardous materials are stored in designated area at the workshop	✓		✓		
3	There are containers for used oils and hydraulic liquids	✓		✓		
4	Used oil products are collected in concrete tank with a volume up to 110% and tank is cleaned according to approved procedures		✓	✓		
5	Workshop is provided with drainage system	✓				
6	Every vehicle is inspected and maintained regularly	✓		✓		To strengthen daily control of special machinery

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
7	All construction vehicles meet Euro standards and are fitted with modern noise suppression equipment		✓	✓		
8	Noise suppression equipment of all vehicles is maintained and checked accordance with approved procedures	✓		✓		
9	All workshop workers are provided with welding equipment and personal protective equipment	✓		✓		
10	All technical water is collected in concrete tank and cleaned according to approved procedures		✓	✓		
<b>Project road</b>						
1	All roads, where construction works on progress, are watered by water trucks	✓		✓		To increase watering time and water truck number, during dry weather condition special control of sites near villages
2	There are flags for passage of cattle, sheep and other animals on appropriate places of the project road		✓		✓	
3	Culvert and bridge construction areas are provided with safety ribbons and wringing signs	✓				
4	Fencing and checkpoint are installed at all work areas where necessary		✓		✓	
5	Waste storage for any kind as well as car or vehicles parking is not permitted within a distance of 100m of any stream (including drainage or irrigation facilities)	✓		✓		
6	Adequate road signs and warning notices are provided on work sites and dangerous areas	✓		✓		
7	Construction vehicles and plants are maintained properly to reduce gas emissions	✓		✓		To strengthen special machinery control

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
8	Noise control measures at sensitive sites	✓		✓		
<b>Borrow pits</b>						
1	Temporary drainage is provided at borrow pits and quarries	✓		✓		
2	Construction work stops between 22.00 and 6.00 hours within 200m of the nearest habitation	✓		✓		There is no a village at a close proximity
3	Stockpiles do not exceed 3m in height	✓		✓		
4	All vehicles with an open body are used for transportation of materials with dust possibility, designed for these purposes with a well-chosen convertible body	✓		✓		
5	During construction works all noise volume restricts according to the national standards	✓		✓		
6	Materials with dust possibility do not load higher than convertible body level and covered with clean tarpaulin	✓		✓		Operators and check men control the level of loading soil
7	All vehicles, equipment and plant meet Euro standards for exhaust emissions		✓	✓		
8	All temporary acquired land rehabilitates		✓			After construction work completion
9	All material residues and contaminated sites are collected and disposed accordance with approved procedures		✓	✓		
10	Watering is provided during material delivery and processing	✓		✓		
11	Any adjacent areas damaged due to spoil ground, restore to its original state	✓		✓		
12	River banks are protected from materials or temporary contractor stockpiles	✓				

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
13	Negative consequences or violations from construction works are controlled with permissible level according to standards	✓				
14	Access roads to borrow pits, borrow pits, quarries and traffic operations are maintained by approved standards	✓		✓		
15	Discharging and diverting water, avoiding flooding or damaging to other works or service causing erosion	✓				
<b>Flora and Fauna</b>						
1	Trees and shrubs outside of construction site, but on road reserve are generally preserved from damages					There are no trees on construction site territory
2	Ancient trees have not cut down during construction works					There are no ancient trees on construction site territory
3	Cutting down has not taken place without the prior permission of relevant local authorities					No plants
4	Trees or shrubs felled or removed only if they interfere to necessary temporary or permanent work					No plants
5	Construction works are stopped on bridge sites during spawning seasons (indicate yes or no to construction activities on going, indicate date)		✓			Bridge construction does not affect to cultivation and harvesting, because they are located on far places

## Ecologic Monitoring Check sheet

Site Monitoring Check sheet		
<b>The site visited on:</b> 21.09.2018  <b>Time:</b> 14:00	<b>Engineer representative:</b> Environment Protection Specialist Imbarova S.E  <b>Contractor representative:</b> Gulzhanat – Ecologist	Engineer's ref #----  Contractor's ref #
Weather conditions: clear, +34C, south-east wind 7 m/sec.		
The work being done at the moment:	Milling of an existing layer, soil compaction, asphalt-concrete laying at Lot 7.	
Problems related to environment	Potential causes	Measures suggested for risk mitigation
Too much dust along the road.	Hot weather conditions and soil characteristics, and insufficient water sprinkling could be the cause.	To increase the number of water tankers and to intensify water sprinkling close to populated areas.
Ecologic audit done by: Imbarova S.E		Contractor representative: Gulzhanat Tashimova

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
Contractor's Base Camp						
1	Septic tanks are installed and cleaned corresponding to approved procedures	✓				
2	All effluents flow to septic tanks or utility water tanks	✓		✓		
3	All hazardous liquids are collected at non-permeable facilities	✓		✓		Concrete ponds built and fenced.
4	Solid and hazard materials are kept at safe work sites	✓		✓		Concrete sites built and fenced per requirements to keep hazardous materials.

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
5	Effluents are collected in drain system and disposed by Contractor	✓		✓		
6	All vehicles drive in and out the Base/Camp are searched.	✓		✓		
7	The workers and other means keep local community and organizations informed about any construction and noisy activities planned	✓		✓		The Contractor attends the meetings at Dossor and Makat and informs Akimat and the public about planned construction stages
8	Open material storage containers are covered by canvas.	✓		✓		Oil waste tanks at construction sites are put into closed containers for further disposal
9	Open fire is prohibited	✓		✓		No open fire observed neither on site nor on Base/Camp
10	Firefighting equipment <ul style="list-style-type: none"> <li>▪ Sand bucket and shovel</li> <li>▪ Foam fire extinguisher</li> <li>▪ Protective coating in canteen</li> </ul>	✓		✓		
11	Fencing and security guards keep the Base/Camp safe from strangers	✓		✓		Security guard is allotted and Post installed at Base/Camp entrance
12	Personal Protective Equipment (PPE) is provided to all labor.	✓		✓		
13	Smoking is prohibited except for smoke shacks	✓		✓		Smoke shacks are built
14	Appropriate traffic signs installed at unsafe areas and warning signs on site	✓		✓		Traffic Safe Rules are met.
15	Potable water is provided by businessmen and license holders to all labor.	✓		✓		
16	Labor coveralls are washed daily		✓			Labor coveralls are washed on requirement
17	All labor are catered three times a day	✓				Local residents have lunch only as they do not work on rotation. It does not breach RoK Labor Code.
18	Canteen at Camp with sanitary conditions	✓				



No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
19	Clinic and First aid kit at the Camp and worksite	✓		✓		Supplies made for First aid kits when required. Clinic visit logbook is maintained.
20	Camp doctor maintains all labor healthy, corresponding care given, examinations done once a month	✓		✓		Pre-work check-up done by Clinic daily and daily examination logbook maintained (alcotest, blood pressure check, etc.).
21	All the area is kept clean. No wastes on the area, except for those intended for disposal	✓		✓		Not arranged at Engineer's office area
22	Camp recreation areas	✓				Camp recreation areas are arranged.
23	Child labor (15 years old and younger)		✓			Not observed
<b>Work site</b>						
1	Liquid wastes from Asphalt Plant are stored in a tank and disposed by "Liman" vacuum truck	✓		✓		
2	Solid wastes from Asphalt Plant are stored and disposed per approved procedures	✓		✓		
3	Gravel is applied at Asphalt Plant to reduce the dust	✓		✓		
4	Plant area is water sprinkled to reduce the dust	✓		✓		Done by dust suppression schedule and depending on weather conditions. Dust suppression is multiplied when windy.
5	The Plant cannot produce the effluents to any area. Impermeable concrete ponds will be built for it.	✓		✓		Contractor Ecologist keeps observing this
6	Masks are provided to all Asphalt Plant and Concrete Plant labor	✓		✓		Provided and used at work
7	All Asphalt Plant and Concrete Plant labor don protective masks	✓		✓		Provided and used at work
8	Sand and crushed stone for concrete and asphalt are kept at wet area	✓		✓		
9	Asphalt Plant is equipped with Firefighting means	✓		✓		Fire extinguisher logbook is available
10	High vibrating Plant or equipment are built, maintained and operated right.	✓		✓		

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
Fuel station						
1	Oil filling will be strictly controlled and is permitted only at the fuel station and on workshop area	✓		✓		
2	Fuel tank storage area is fenced and it an impervious and roof is closed	✓		✓		Concrete ponds built and fenced.
3	Fuel station, which provided with firefighting equipment, is checked weekly	✓		✓		Concrete sites built and fenced per requirements to keep hazardous materials.
4	There is a warning signs at fuel station		✓		✓	
5	Fuel station provided with wastebasket	✓				
Contractor's Workshop and Car Wash						
1	Liquid hazardous materials are stored in designated area at the workshop	✓		✓		It is necessary to organize special concreted areas for storage of hazardous materials and to install a fence
2	Solid hazardous materials are stored in designated area at the workshop	✓		✓		
3	There are containers for used oils and hydraulic liquids	✓		✓		
4	Used oil products are collected in concrete tank with a volume up to 110% and tank is cleaned according to approved procedures		✓	✓		
5	Workshop is provided with drainage system	✓				
6	Every vehicle is inspected and maintained regularly	✓		✓		To strengthen daily control of special machinery
7	All construction vehicles meet Euro standards and are fitted with modern noise suppression equipment		✓	✓		
8	Noise suppression equipment of all vehicles is maintained and checked accordance with approved procedures	✓		✓		

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
9	All workshop workers are provided with welding equipment and personal protective equipment	✓		✓		
10	All technical water is collected in concrete tank and cleaned according to approved procedures		✓	✓		
<b>Project road</b>						
1	All roads, where construction works on progress, are watered by water trucks	✓		✓		To increase watering time and water truck number, during dry weather condition special control of sites near villages
2	There are flags for passage of cattle, sheep and other animals on appropriate places of the project road		✓		✓	
3	Culvert and bridge construction areas are provided with safety ribbons and warning signs	✓				
4	Fencing and checkpoint are installed at all work areas where necessary		✓		✓	
5	Waste storage for any kind as well as car or vehicles parking is not permitted within a distance of 100m of any stream (including drainage or irrigation facilities)	✓		✓		
6	Adequate road signs and warning notices are provided on work sites and dangerous areas	✓		✓		
7	Construction vehicles and plants are maintained properly to reduce gas emissions	✓		✓		To strengthen special machinery control
8	Noise control measures at sensitive sites	✓		✓		
<b>Borrow pits</b>						
1	Temporary drainage is provided at borrow pits and quarries	✓		✓		

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
2	Construction work stops between 22.00 and 6.00 hours within 200m of the nearest habitation	✓		✓		There is no a village at a close proximity
3	Stockpiles do not exceed 3m in height	✓		✓		
4	All vehicles with an open body are used for transportation of materials with dust possibility, designed for these purposes with a well-chosen convertible body	✓		✓		
5	During construction works all noise volume restricts according to the national standards	✓		✓		
6	Materials with dust possibility do not load higher than convertible body level and covered with clean tarpaulin	✓		✓		Operators and check men control the level of loading soil
7	All vehicles, equipment and plant meet Euro standards for exhaust emissions		✓	✓		
8	All temporary acquired land rehabilitates		✓			After construction work completion
9	All material residues and contaminated sites are collected and disposed accordance with approved procedures		✓	✓		
10	Watering is provided during material delivery and processing	✓		✓		
11	Any adjacent areas damaged due to spoil ground, restore to its original state	✓		✓		
12	River banks are protected from materials or temporary contractor stockpiles	✓				
13	Negative consequences or violations from construction works are controlled with permissible level according to standards	✓				
14	Access roads to borrow pits, borrow pits, quarries and traffic operations are maintained by approved standards	✓		✓		

No.	Environment Protection Measures	Done		In process		Comments
		Yes	No	Yes	No	
15	Discharging and diverting water, avoiding flooding or damaging to other works or service causing erosion	✓				
<b>Flora and Fauna</b>						
1	Trees and shrubs outside of construction site, but on road reserve are generally preserved from damages					There are no trees on construction site territory
2	Ancient trees have not cut down during construction works					There are no ancient trees on construction site territory
3	Cutting down has not taken place without the prior permission of relevant local authorities					No plants
4	Trees or shrubs felled or removed only if they interfere to necessary temporary or permanent work					No plants
5	Construction works are stopped on bridge sites during spawning seasons (indicate yes or no to construction activities on going, indicate date)		✓			Bridge construction does not affect to cultivation and harvesting, because they are located on far places