

Environmental Monitoring Report

Reporting Period: September – December 2016
December 2016

Uzbekistan: Djizzak Sanitation System Development Project

Subproject: Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400mm, L=0.45 km)

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“Uzkommunhizmat” for the Government of Uzbekistan and the Asian Development Bank.

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ABBREVIATION

ADB	-	Asian Development Bank
EA	-	Executive Agency
EIA	-	Environmental Impact Statement
EMP	-	Environmental Management Plan
EMR	-	Environmental Monitoring Report
ICB	-	International Contract Bidding
IEE	-	Initial Environmental Examination
FAM	-	Facility Administration Memorandum
FFA	-	Financing Framework Agreement
PCU	-	Project Coordination Unit
SCE	-	Supervision Consultant Engineer
SEC	-	Statements of Environmental Consequences
SEMP	-	Site Environmental Management Plan
SPS	-	Safeguards Policy Statement
WDC	-	Water distribution station
UCSA	-	Uzbek Communal Services Agency "Uzkommuhizmat"

PART I - INTRODUCTION

1.1 Construction activities and project progress during the previous 6 months

A. General Information

1. In November 2015, the Government of the Republic of Uzbekistan (the Government) signed a Loan Agreement (LA) with the Asian Development Bank (ADB) to finance the Djizzak Sanitation System Development Project (DSSDP).
2. Loan 3275-UZB for \$81 million was approved on 23 November 2015, became effective on 29 February 2016 with loan closing date of 31 October 2021.
3. Djizzak Sanitation System Development Project includes construction of a new WWTP, construction and rehabilitation of about 63 km of trunk sewers and networks, and rehabilitation of three pumping stations. By project completion, the system will collect and treat 30.000 m³/day of sewage from domestic and non-domestic consumers, including at least 85,000 residents of Djizzak city and the Uch-Tepa district center
4. This final EMR reflects only a small construction contract “Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400mm, L=0.45 km)”.

There is a priority small construction contract (DS-WW-03/01) under Djizak Sanitation System Development Project, awarded for implementing civil works under this project “Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400mm, L=0.45 km)”. This part of sewer networks was in urgent need of Djizzak Provincial Administration (Khokimiyat).

5. As part of the Financing Framework Agreement all contracts need to be implemented in compliance with environmental requirements, described in Initial Environmental Examinations conducted for the project. The IEE includes Environmental Management Plan.
6. The Government through UCSA will ensure that all safeguard requirements prescribed for the Project that have been prepared are implemented. The project, in accordance to ADB SPS (2009), was categorized as “B” project both for environment and Involuntary Resettlement, and as “C” project for Indigenous People impacts.

B. Objectives, Scope and Methodology

7. The main objective of this report is to provide information about progress on implementation of Environmental Management Plan (EMP) including environmental monitoring, to report any environmental concerns occurred during project implementation, to suggest correction actions.

8. The report is also prepared to comply with environmental safeguards of the Government of Uzbekistan and ADB Safeguards Policy Statement (SPS), (2009) as well as to fulfill the Loan Covenants as described in Loan Agreement 3275-UZB between ADB and Uzbekistan.

9. The location of project region is given in **Figure 1** below.

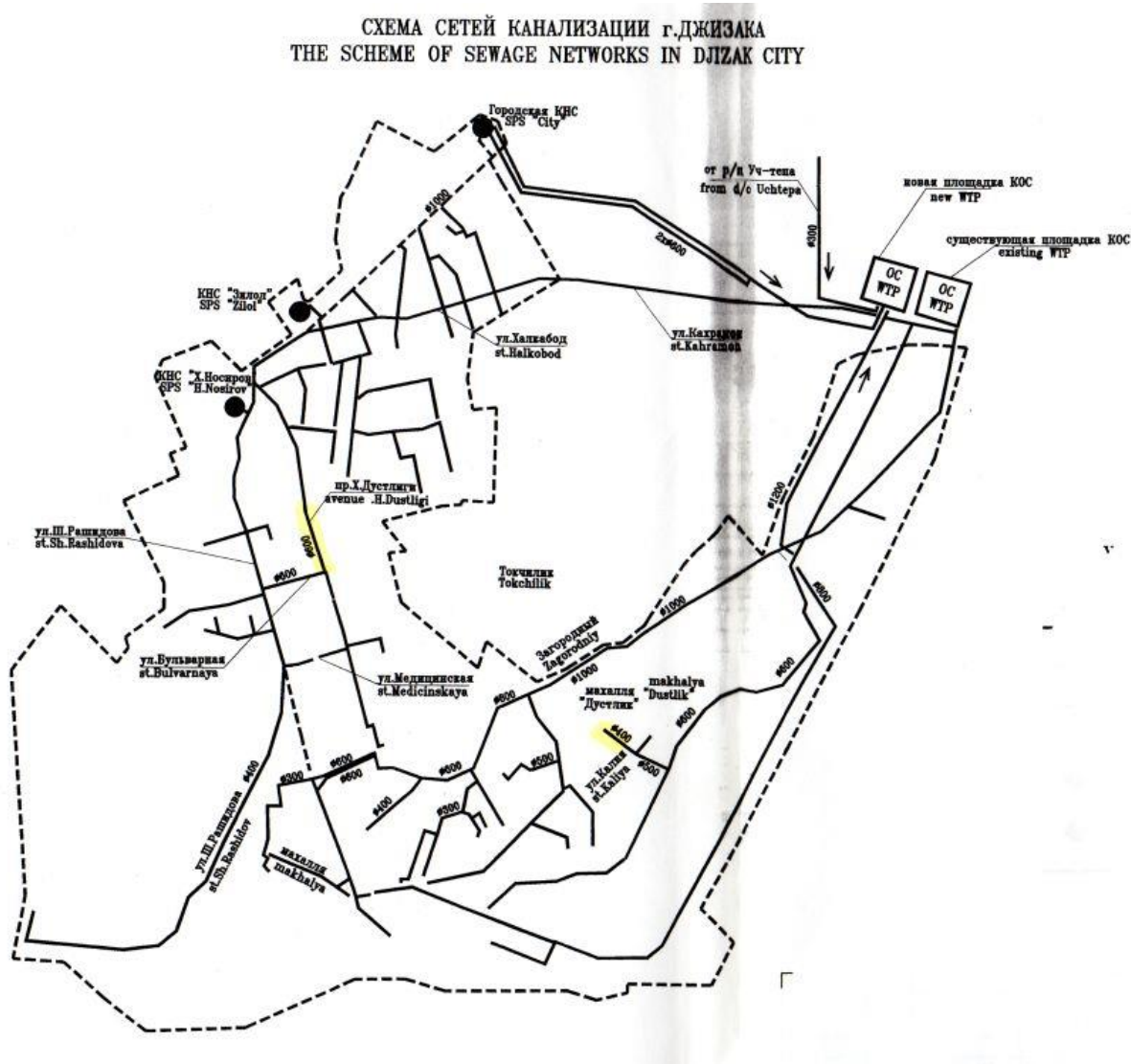


Figure 1: Djizzak Province and Djizzak city

C. Construction activities and project progress during the reported period

10. Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400mm, L=0.45 km) are planned to be implementing under this contract (Fig. 2).

Figure 2: Location of project sites (highlighted in yellow)



11. Information about performed civil works during the reported period is given in **Table 1** below.

Table 1: Information about the progress of construction activities performed under project

# of Contract/ Subproject Name	Construction Activities to be Performed	Percentage of Works Performed
DS-WW-03/01 Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600 mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400 mm, L=0.45 km)	Laying of polyethylene and steel pipes; Casing of pipes; Concrete cover of pipe spaces in casing ends; Construction of precast concrete sewerage wells, including ladders, concrete floor slabs, heavy lockable well covers, waterproofing; Dismantling and reconstruction of destroyed asphalt cover; Installation of water pipe, cable, heat pipeline, gas pipeline crossings; Dewatering of excavation, sand base, gravel layer, disposal of excess soil	As of September 2016 100%

1.2 Changes in project organization and environmental management team

12. According to Project Administration Manual (PAM) (December 2016), the Uzbekistan Communal Services Agency (UCSA) is the executing agency (EA) for the project. The EA, together with a project coordination unit (PCU) established within UCSA, will be responsible for monitoring and evaluating project activities and outputs, including monitoring compliance with safeguard requirements and preparation of review reports. The Djizzak Suvokova will be the implementing agency (IA) responsible for day-to-day project implementation, and will report to UCSA.

13. As per PAM, UCSA will ensure that the design, construction, operation and maintenance of the facilities under the Project are carried out in accordance with ADB SPS (2009), applicable laws and regulations in Uzbekistan, and recommendation from IEE and its EMP. UCSA will ensure that potential adverse environmental impacts arising from the project are minimized by implementing all mitigation and monitoring measures as presented in the EMP as part of the IEE report. UCSA will ensure that:

- (i) The PMU will engage the environment specialist as part of its team to implement and record the implementation of the EMPs prepared for the project.
- (ii) If the detailed design will be changed, the updated EMP has to be prepared.
- (iii) All necessary government permits and license, including ecological expertise opinion, to construct the wastewater treatment plant and its supporting facilities will be obtained.
- (iv) Detailed engineering designs, civil works and other contracts for the project incorporate applicable environmental measures identified in the IEE and its EMP.
- (v) Bidding document for supervision consultant/engineer will include a requirement to enable them to assist in implementing IEE and its EMP.
- (vi) All bidding document for civil works/turnkey contract will include all safeguards requirement as describe in the IEE and its EMP.

- (vii) The winning bidder will have adequate resources to implement safeguards requirement.
- (viii) The contractor will need to prepare site EMP prior to implementation of civil works.
- (ix) Starting from project commencement, the PMU will submit annual environmental reports on implementation of EMP, and semi-annual environmental monitoring report after commencement of civil works. The report will include, among other things, a review of progress made on environmental measures detailed in the IEE and EMP, and problems encountered or unexpected impacts encountered during implementation and remedial measures taken to address those problems. The report will also include any complaint received and action to resolve the complaint under the grievance redress mechanism.
- (x) The PMU will take responsibility as the secretariat for grievance redress mechanism for both environment and social aspect of the project;
- (xi) Civil works contractors are supervised and monitored to ensure compliance with the requirements of the IEE and EMP.
- (xii) If unexpected or unforeseen environmental impacts occurred, the environment specialist from PMU together with the supervision consultant, and contractor will take corrective measures promptly.

14. During reported period in PCU worked a social and environmental specialist who is responsible for:

- monitoring and assessment compliance with the environmental safeguards of the project;
- establishing an environmental monitoring program;
- preparation of the project environmental monitoring report;
- conducting Final Environmental Audit and preparation Final Environmental Audit Report.

15. This construction contract with the estimated completion date October 2016 not included to the scope of works of the Supervision Consultants, since the Consultant's contract signed only in August 2016 and became effective in September 2016.

16. The Contractor appointed Environmental Specialist who is responsible for environmental safeguards implementation at construction sites. Designated Contractor's Environmental Specialist is in charge for preparation of environmental monitoring reports as well. He conducts environmental audits on project sites and trainings for workers (**Figure 3**).

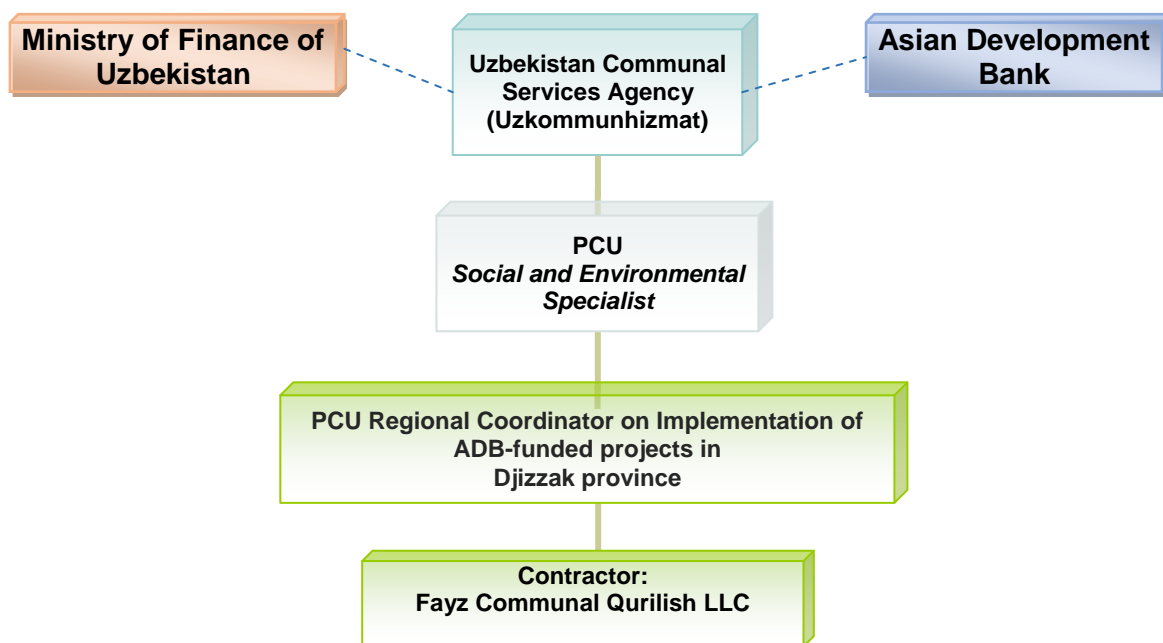


Figure 3: Institutional Chart of the Environmental Safeguards Performance

1.3 Relationships with contractors, owner, lender

17. The awarded contract under the project is given in the **Table 2**.

Table 2: Contract Information

Project Location		Subproject/Site Name	Supervision Consultant	Contractor		Contract Signature date	Contract Final Date
Province	City			No. of the Contract	Name of Contractor		
Djizzak	Djizzak	Reconstruction of sewers along the Halqlar Dustligi Avenue (D=600 mm, L=1.1 km) and Sewer from the makhalla Dustlik (D=400 mm, L=0.45 km)	Individual Supervision consultant employed by Suvokova	DS-WW-03/01	Consortium "FayzKommunalQurilish" LLC and "DjizakPolimer Plast" LLC	11 March 2016	6 months after commencement date

18. The IEE and EMP are part of the construction contract which is duty to comply by the Contractor.
19. Contractor fully recognizes own responsibility on environmental performance and implemented it as required.
20. At the beginning stage, Contractor has started work on receiving necessary permissions from local municipal agencies on disposal of wastes generating during civil works, also signed contracts with the licensed suppliers to deliver the construction materials.
21. During reporting period (April-September) two EMRs for April – May and June – September were submitted by Contractor to PCU.

1.4 Project permitting status

22. National environmental expertise on Djizzak Sanitation System Development Project was conducted at the province level of Environmental Expertise Department.
23. In accordance with National Environmental Legislation the project classified as Category 3 (low risk of environmental impact):
 - Environmental Impact Statement (EIS) of Djizzak Sanitation System Development Project.
24. State Nature Protection Committee of the Republic of Uzbekistan approved mentioned EIS which is confirmed by a State Environmental Appraisal. The Environmental Appraisal confirms establishment of project's compliance with environmental legislation applicable to the scope and content of the EIS.
25. Briefly, in accordance with received Appraisal, during construction period special attention should be paid to safety for environment structures and solid wastes disposal, temporary storage of them in specially equipped places, inadmissibility of unauthorized subtraction of raw materials – broken stones, gravel and sand. Scanned copy of Environmental Appraisal is included in Attachment 1.
26. As a next stage of State Environmental Assessment process, Statement on Environmental Consequences has to be developed prior project commissioning. The Statement on Environmental Consequences has to include a schedule for monitoring of ground water quality.
27. In accordance with ADB's Safeguard Policy Statement, the Project is classified as category B, because potential adverse environmental impacts are less adverse than those of category A projects.
28. Initial Environmental Examination (IEE) was prepared by the Borrower to identify potential negative impacts to the environment and mitigation measures related to works. IEE was published at ADB website in August 2014.

PART II - ENVIRONMENTAL MONITORING

29. The EMP includes a listing of impacts, mitigation measures, monitoring needs and definitions of where and when impacts are likely and who will have to implement the mitigation and monitoring measures, as well as who oversees the work. In the IEE the EMP is presented as two matrix tables; the mitigation table and the monitoring table, with each listing one set of numbered items, permitting easy cross referencing and use in bid document and construction contract preparation.
30. However the EMP developed for the whole Djizzak Sanitation System Development Project which covers the construction of new Waste Water Treatment Plant, sewerage facilities, pump stations and sewer networks. The subject contract is very little part of the sewer networks (1.5km) provided by the Project. This part of sewer networks was in urgent need of Djizzak Provincial Administration (Khokimiyat). Works are already completed.
31. Contractor's Environmental specialist conducted weekly and monthly observations at the construction sites to check the implementation of environmental requirements.
32. The Contractor used formats for monitoring generated and disposed wastes to municipal landfills (Attachment 5). In addition to this form, Contractor used checklist for monitoring of waste disposal, noise level and air quality (Attachment 6).
33. According to the environmental monitoring reports submitted by Contractors, no pollution of air and water at the construction sites were observed. No complaints were received from local people living in project or surrounded area.
34. Emissions in air from vehicles calculated in accordance with national standards are provided in EMR of the Contractor. The calculation based on number of techniques used during works. According to calculation, emissions during the reported period did not exceed norms defined in Environmental Assessment report endorsed by State Nature Protection Committee. (ref. sub-clause III. Air Quality below)
35. EMR of the Contractor has a statement that noise measurements were done and the results met national sanitarian norms. (ref. sub-clause I. Noise and Vibration below).
36. The Contractors have official agreements with the local communal services on removal of construction and domestic wastes to the municipal landfill. Depending to the stage of construction/reconstruction and remoteness of construction site from closest community, removal could be done once per week or 5 days, and it was monitored on a regular basis by the Contractor's environmental specialist. The Contractors used forms for monitoring generated and disposed wastes at municipal landfills (Attachment 5).
37. All construction sites have first-aid kit available for workers (Attachment 7. Fig.4). Workers have a special clothes and helmets (PPE) and use them during working on sites.
38. Information about activities under the contract is available at construction site. Informative banner with brief description and objectives of project, implementers, schedule of

construction works, deadlines and contact information were placed in the area close to construction site. GRM log-books are available in each construction site (Attachment 7. Fig.1).

Noise and vibration

39. Construction of sewerage pipelines in inhabited places and on streets conducted during daytime from 09:00 am to 06:00 pm.

40. To limit the dust at the construction sites adjacent to the sites area (roads) being watered in a due time.

41. The chief of a site of the Contractor - provides conformity of EMP, visually inspects safe use of the equipment, noise level of vehicles and mechanisms. The mechanical engineer of a site checks a technical condition of the mechanisms that the Contractor has.

42. The work carried out to inspect the noise level has shown that the noise level at the construction site is not excessive noise levels established by SanPINUzNo.01-20-07- Sanitary standards for permissible noise levels in the workplace. Noise levels comply with the limits SanPINUzNo.01-20-07 that is 32 dB at a rate of 65-80 dB (decibel).

43. Noise and vibration corresponds to the State sanitary standards of acceptable noise levels on construction sites. The project doesn't produce any significant negative environmental impacts.

Water quality

44. The networks were designed and being constructed to have no impact on the natural drainage pattern.

45. To avoid contamination of water resources and environment the waste collection vehicles take out the garbage from the site in accordance to the schedule.

46. After completion of civil works and commissioning of new networks the quality of ground water will not be changed.

47. All structures in contact with the ground were designed incorporating anti-corrosion measures for mitigation of negative impact on ground water.

Air Quality

48. The trucks of the Contractor for excavation works are:

Excavator – 1 unit

Lorry – 1 unit

Loader truck – 1 unit

Work schedule of trucks is 8 hours per day.

49. Monitoring and analyzing of atmospheric pollution on dust, toxic materials and gas from construction vehicle shows that the emissions do not exceed the norm for atmospheric pollution (see Table 3).

Table 3: Description of contaminant emission sources

Total emissions from the construction

Description	g/day	ton for June-September
Inorganic dust	0,68	1,73
Carbonic oxide	0,0167	0,047
Nitrogen peroxide	0,00167	0,0047
Aldehyde	0,0008	0,002
Total	0,69917	1,7837

Table 4: Description of the work of dust-gas-trapping unit and neutralizing unit

At the construction site the dust-gas-trapping unit is not available

Contaminant	Maximum permissible concentration (MPC) or Safe Reference Levels of Impact, mg/m ³	Level of danger	Fixed quota in MPC parts	Maximum concentration in MPC parts	Compliance with the established quota (+/-)	Percentage of contribution to emissions	Total emissions, g/sec	Total emissions, ton/month
Inorganic dust	0,5	3	0,33	0,31	+	96,99	0,68	1,73
Carbonic oxide	5,0	4	0,5	0,04	+	2,63	0,0167	0,047
Nitrogen peroxide	0,085	2	0,25	0,07	+	0,26	0,00167	0,0047
Aldehyde	0,3	3	0,33	0,03	+	0,11	0,0008	0,002

50. Appropriate measures were taken to prevent the pollution of atmospheric air, to limit the dust level from working vehicles and enforce strict observance of safety rules at main road crossing, along main roads and the makhalla streets.

51. In EMR the contractor submitted following calculations of ground-level concentrations, analysis of pollutant dispersion fields.

52. Calculation of fields of ground-level concentrations of hazardous substances carried out using software "Ecologist", the size of the area analyzed is 7*4 km, the calculation is made in increments of 250 x 250 m. According to the calculations it was determined the following level of air pollution:

- **Inorganic dust.** According to the calculations the maximum ground-level concentration of pollutants outside the construction site is 0.31 MAC (maximum allowable concentration) and within the site is 0.33 MAC, which corresponds to a quota of 0.33 MAC. The largest contribution comes from excavation and ground filling works.
- **Nitrogen peroxide.** According to the calculations the maximum ground-level concentrations of pollutants within the construction site is 0.09 MAC, and outside the sites is 0.07 MAC, which is below the quota of 0.25 MAC.
- **Carbon monoxide.** According to the calculations the maximum ground-level concentration of pollutants outside the construction site is 0.04 MPC, which is lower than the quota of 0.5 MAC.
- **Aldehydes.** According to the calculations the maximum ground-level concentration of pollutants outside the construction site is 0.03 MPC, which is below the quota of 0.33 MAC.

53. As a result of the analysis of ground-level concentrations of polluting substances, it is not revealed the air pollution that exceeds the level of quotas. In this regard, no environmental mitigation measures are required.

Flora and fauna monitoring

54. The impact on flora and fauna in the project area is minimal. Works monitored and controlled in accordance with the EMP. During monitoring no cut of trees and bushes revealed due to construction.

PART III - ENVIRONMENTAL MANAGEMENT

3.1 Environmental Management System

55. For the construction period the Contractor submitted two environmental monitoring reports for April – May 2016 and June – September 2016.

56. In addition, Contractor prepared Inventory of wastes fraction. The document provides information about type and amount of wastes generated during civil works.

57. Procedure of informing local population about planning works on increasing traffic and measures for dust control conducted by the Contractor.

58. Mobile informative banners with brief description and objectives of project, implementers, schedule of construction works, deadlines and contact information provided. (Attachment 7. Fig.2)

3.2 Inspection and Audit

59. Regular site monitoring visits were carried out during the reporting period by PCU Environmental specialist, PCU Engineer, PCU Regional Coordinator in Djizzak, the Employer of contract – Djizzak Vodokanal and Construction Supervisor appointed by Vodokanal to check up realization of environmental protection measures in parallel to civil works inspection.

60. As stated in p.15 above this construction contract with the estimated completion date October 2016 not included to the scope of works of the Supervision Consultants, since the Consultant's contract signed only in August 2016 and became effective in September 2016.

61. The list of all review missions conducted by PCU is described in the table 5 below:

Table 5: List of review missions conducted by PCU and SC

Date of Review Mission	Conducted by
16 April	PCU Environmental Specialist with PCU Regional Coordinator in Djizzak
11 June	PCU Director with PCU Regional Coordinator in Djizzak
29 June	PCU Sewerage Specialist
14 July	PCU Chief Engineer
18 August	PCU Sewerage Specialist

9 September	PCU Sewerage Specialist
29 September	PCU Environmental Specialist with PCU Regional Coordinator in Djizzak

62. According to PCU Regional Coordinator and Contractors, workers are local and living in the neighboring area, and there was no construction camp available. There is no canteen in sites.

63. Old metal pipes are not dug out. The Contractor not damaged the asphalt cover of roads according to the project design. They excavated new trenches at the road-side for new pipe laying.

64. The Contractor has official agreement with the local communal services on removal of construction and domestic wastes to the municipal landfill. Depending to the stage of construction/rehabilitation and remoteness of construction site from closest community, removal was done once per week or 10 days.

65. The construction site has first-aid kit available for workers (Attachment 7. Fig.4) and there are regular trainings on H&S conducted by Engineers. Workers mostly have a special clothes and helmets and use them during working on sites.

66. Some construction works are being implemented in the immediate closeness of residential facilities. According to the Contractor and PCU Regional Coordinator, there were no any complaints from the local citizens regarding the noise from construction works.

67. Work sites during laying of the pipes are well fenced with proper special warning signals and safety tapes arranged (Attachment 7. Fig.5-6).

3.3 Non-compliance notices and Corrective Actions

68. The non-compliances observed during PCU specialist and Contractor's environmental specialist site visits were addressed. The status of addressing non-compliances is presented in Table 6 below.

69.

Table 6: Non-compliance observed during site visit and status of their addressing

Description of non-compliance	Undertaken activities
1. No complaints log book on construction site (May 2016).	1. Now the complaints log book is available at the construction site (May 2016).
2. Non-fenced territory and absence of using special warning signals, light reflecting signs and safety tapes (May 2016).	2. Work sites during laying of pipelines are well fenced with proper special warning signals and safety tapes arranged (May 2016).
3. No informative banners with brief description of project, implementers, schedule of construction works, deadlines and contact information (May 2016).	3. Informative banner with brief description of project, implementers, schedule of construction works, deadlines and contact information is placed (May 2016).

3.3 Consultation and complaints

70. Information about activities under the contract is available in construction site. Informative Banner with brief description of project, implementer, and schedule of construction works and contact information was placed in the area close to construction site.

71. Contractor work closely with local communities in order to inform project activities.

72. According to Contractor and PCU Regional Coordinator, there was no any complaint from the local citizens regarding the noise from construction site.

73. GRM log-books are available in each construction site (Attachment 7. Fig.1).

PART IV - CONCLUSION AND FINAL ENVIRONMENTAL POST-CONSTRUCTION AUDIT

74. Based on results of EMR the following conclusions were made:

- ▶ Contractor conducted regular meetings with workers and discussed environmental performance issues.
- ▶ The national environmental clearance was received and IEE was published at ADB web-site for the whole Djizzak Sanitation System Development Project in 2014.


Necessary permissions were received for wastes disposal on municipal landfills and designated places. Contractor prepared periodical EMRs and submitted to PCU.

- ▶ The Employer of contract – Djizzak Vodokanal and Contractor closely worked with local communities on informing about project works.
- ▶ Post Construction Environmental Audit conducted to make sure that all civil works are completed in compliance with environmental requirements
- ▶ Per national legislation completed works have to be accepted by State Accepting Committee prior hand over to Vodokanal. The project examined and accepted by the Committee that is confirmed by Acts. Example of State Accepting Committee's Act is presented in Attachment 9. In accordance with Uzbek national regulations, the presence of the expert of the State Committee for Nature Protection in Accepting Committee is obligatory to confirm that completed project work meets national environmental requirements.

75. Based on the project's documents review and conducted site visits it was revealed the following findings:

- I. In terms of environment at the project implementation stage strong negative impact on environment was not expected. According to the ADB instructions the project fell under Category B. Environmental expertise for project was conducted at the province level by State ecological expertise Department of the State Committee for Nature Protection and respective Environmental Appraisal was received;
- II. All documents developed under the project (Loan Agreement 3275-UZB, RPP, Contracts) included the obligation to implement the project according to the ADB SPS 2009 as well as pursuant to the environmental requirements stipulated in Uzbek legislation;
- III. No incidents have occurred during the construction stage and no complaints have been initiated by the residents;
- IV. The Contractor hired environmental specialist with relevant qualifications;
- V. Under the project PCU environmental specialist performed permanent environmental monitoring. Non-compliances identified by them adequately and corrective actions were planned. The effectiveness of corrective actions was also controlled by the above-mentioned specialist.
- VI. Corrective actions were made for each non-compliance and the quality of performance of corrective actions was controlled. Identified non-compliances and performed corrective actions are reflected in the reports of the Contractor, as well as in present Report.
- VII. Final environmental audit conducted by the PCU environmental specialist on 29 September 2016. Environmental audit results are satisfactory.

Attachment 1. The Environmental Appraisal for Djizzak Sanitation System Development Project

ЖИЗЗАХ ВИЛОЯТИ ТАБИАТНИ МУХОФАЗА КИЛИШ КУМИТАСИ ДАВЛАТ ЭКОЛОГИК ЭКСПЕРТИЗАСИ		JIZZAX VILOYATI TABIATNI MUHOFAZA QILISH QO'MITASI DAVLAT EKOLOGIK EKSPERTIZASI
Директору ЧП «SUVOQAVA-XIZMAT»: B.M.KAPMAЗИНУ.		
<u>Копии:</u>		
Начальнику отделу по охране природы г.Джизака.		
<u>ЗАКЛЮЧЕНИЕ</u> <u>ГОСУДАРСТВЕННОЙ ЭКОЛОГИЧЕСКОЙ ЭКСПЕРТИЗЫ</u>		
г. Джизак	№ <u>455-Э</u>	от <u>"14" августа 2014 г.</u>
<u>По объекту:</u> Проект заявления о воздействии на окружающую среду (ЗВОС) реконструкция канализационных сетей и очистных сооружений города Джизак.		
<u>Заказчик:</u>	ЧП «SUVOQAVA-XIZMAT».	
<u>Разработчик:</u>	ЧП «SUVOQAVA-XIZMAT».	
<p>На государственную экологическую экспертизу представлены материалы первого этапа оценки воздействия на окружающую среду (ЗВОС) реконструкция канализационных сетей и очистных сооружений города Джизак.</p> <p>Джизакская область находится в центральной части Узбекистан между реками Сырдарья и Зеравшан. Площадь территории области 21,21 тыс. кв. км. Джизакская область граничит на севере с Республикой Казахстан, на востоке с Сырдарьинской областью, на западе – с Самаркандской и Бухарской областями.</p> <p>Население: 1205,0 тыс. чел. (по состоянию на 1 января 2013 г.). Районы: Арнасай, Бахмаль, Галляараль, Джизак, Дустлик, Заамин, Зарбдор, Зафарabad, Мирзачуль, Пахтакор, Фариш и Янгиобод.</p> <p>Административный центр: город Джизак расположен в долине реки Санзар, у северного подножия гор Нурота, южной части Мирзачульской степи, в 180 км к юго-западу от Ташкента, в 90 км к северо-востоку от Самарканда. Город граничит с Джизакским и Галляаральскими районами Джизакской области. Площадь территории города 9460 га.</p> <p>В систему канализации г.Джизака принимаются хозяйственно-фекальные стоки от населения, общественных и коммунальных учреждений, хозяйственно-бытовые и производственные стоки промышленных предприятий города и р/ц Уч-Тепа.</p> <p>В настоящее время сеть распределения воды состоит из 40 км магистральных водоводов диаметром от 800 мм до 300 мм и 160 км сетей распределения. Система водоснабжения города Джизак эксплуатируется предприятием «Сувокова» города Джизак.</p> <p>Общее количество домовладений и квартир в г.Джизаке, обслуживаемых предприятием «Жиззах Оковасув» составляет 12781.</p> <p>Численность населения, обеспеченного канализацией, в г.Джизаке составляет 37,768 тыс. человек, в р/ц Уч-тепа, чьи стоки также должны направляться на Джизакские очистные сооружения – 1,876 тыс. человек.</p>		

Охват населения централизованными системами водоотведения в настоящее время составляет по г.Джизаку 23,6 % по р/ц Уч-Тепа -15 %.

Таким образом, большая часть населения города и райцентра использует в качестве канализации выгребные ямы или септики и туда сбрасывают сточные воды.

Реализация проектного решения по компоненту строительство, реконструкция канализационных сетей, насосных станций и КОС приведет к улучшению качества отводимых сточных вод, что благоприятно повлияет на окружающую среду и здоровье населения.

Мощность существующей системы канализации – 50 тыс. м³/сут. по данным 2013 г. в систему поступило – 10,63 тыс. м³/сут сточных вод, в том числе:

- от населения – 7,04 тыс.м³/сут;
- от бюджетных организаций – 1,94 тыс. м³/сут;
- от прочих оптовых потребителей – 1,65 тыс.м³/сут.

Объем сточных вод, принимаемых со стороны канализационного очистного сооружения в марте 2014 г. оценивались в среднем объемах в пределах 10,0 тыс. м³/сутки.

Были изучены и оценены три варианта развития системы канализации (варианты по очистным сооружениям рассматриваются отдельно):

Вариант 1: реконструкция 16,75 км существующих аварийных канализационных коллекторов; строительство 11,8 км новых напорных линий от насосных станций, самотечных коллекторов до ОС, реконструкция трех существующих КНС, ликвидация одной временной КНС и строительство взамен новой КНС.

Вариант 2: реконструкция 16,75 км существующих аварийных канализационных коллекторов плюс строительство 45,8 км новых канализационных коллекторов в районах города, не охваченных услугами канализации, реконструкция трех существующих КНС, ликвидация одной временной КНС и строительство взамен новой КНС.

Вариант 3: реконструкция 16,75 км существующих канализационных коллекторов плюс строительство 102 км новых канализационных коллекторов в районах города, не охваченных услугами канализации, реконструкция трех существующих КНС, ликвидация одной временной КНС и строительство взамен новой КНС.

Ввод объектов в эксплуатацию намечен в 2019 году.

Данным проектом предусмотрено:

- реконструкция 16,75 км канализационных коллекторов и сетей, находящихся в аварийном состоянии;
- строительство 35,77 км канализационных коллекторов и 10 км распределительных сетей;
- реконструкция 3-х канализационных насосных станций перекачки сточных вод, находящихся в аварийном состоянии;
- строительство 1 канализационной насосной станции перекачки сточных вод;
- строительство очистных сооружений канализации мощностью 30,0 тыс. м³/сутки (1 очередь с учетом 2020 г) для обеспечения нормативной очистки сточных вод г.Джизака;
- оснащение ПУ «Сувокова» г.Джизака необходимыми машинами и механизмами для промывки канализационных сетей и ликвидации аварий и лабораторным оборудованием для анализа качества очистки сточных вод;
- институциональное усиление управленческого и инженерно-технического персонала ПУ «Сувокова», эксплуатирующих системы канализации.

Строительство канализационных очистных сооружений г.Джизак мощностью 30 тыс.м³/сутки (I очередь). Существующие сооружения на площадке очистных сооружений находятся в аварийном состоянии, реконструировать их или осуществлять новое строительство в пределах существующей площадки невозможно, т.к. невозможно обеспечить зону санитарной охраны очистных сооружений 500 м (на территории зоны санитарной охраны старых КОС построен жилой поселок).

В результате анализа существующего положения, с учетом требований Азиатского банка развития, принято решение о выделении нового участка под строительство очистных сооружений размером 31,2 га.

Строительство канализационных очистных сооружений включает в себя строительство:

- главная насосная станция;
- песколовка горизонтальная с 2 отделениями – 1 шт;
- первичные отстойники $D=30$ м с насосной станцией – 2 шт;
- аэротенки четырехкоридорные $60,0 \times 4,5 \times 4,4$ (h) – 2 шт;
- вторичные отстойники $D=30$ м – 3 шт;
- комплекс доочистки стоков;
- смеситель – лоток Паршаля;
- контактные резервуары;
- аэробные стабилизаторы четырехкоридорные $48,0 \times 4,5 \times 3,2$ – 2 шт;
- осадкоуплотнители $D=18$ м с насосной станцией – 2 шт;
- насосно-воздуходувная станция;
- песковые площадки;
- иловые площадки;
- иловый резервуар;
- хлораторная;
- дренажная насосная станция иловых площадок;
- дренажная насосная станция песковых площадок;
- насосная станция над скважиной;
- водопроводная башня;
- контора-лаборатория;
- санпропускник;
- РММ;
- гараж;
- материальный склад;
- проходная.

В проекте предусматриваются следующие методы очистки сточных вод и обработка их осадка:

- 1) Полная механическая очистка на:
 - решетках с механическими граблями;
 - песколовках горизонтальных;
 - первичных радиальных отстойниках $D=30$ м.
- 2) Полная биологическая очистка на аэротенках – вытеснителях с регенерацией активного ила и вторичных радиальных отстойниках $D=30$ м;
- 3) Обеззараживания – жидкими хлором;
- 4) Обработка осадков – аэробная в аэробных стабилизаторах и уплотнение в осадкоуплотнителях;
- 5) Подсушивание осадка на иловых площадках.

Строительство сооружений будет выполнено с применением новейшего оборудования обеспечивающим:

- полную автоматизацию процесса очистки сточных вод;
- автоматизацию, гарантирующую высокую экономичность очистки, а также минимальное потребление электроэнергии и хим. Реагентов;
- обучение персонала в период реконструкции и ввода сооружений в эксплуатацию.

Реконструкция канализационных сетей и строительство очистных сооружений, практически являются природоохранными мероприятиями, но в процессе ведения работ оказывают незначительное воздействие на экологическую ситуацию на объектах

строительства, местах прокладки канализационных сетей, территорий дислокации строительных организаций.

Источниками воздействия на окружающую среду при реконструкции канализационных сетей и очистных сооружений являются: сооружения и производственные здания основной и вспомогательной технологии как материальные объекты, размещаемые в окружающей среде, к которым относятся очистные сооружения, канализационные насосные станции; технологические подземные коммуникации. Где используются бетонные, чугунные, пластмассовые, стальные трубы, реагентное хозяйство, места хранения хлора.

Ожидается, что воздействие рассматриваемого проекта на окружающую среду будет преимущественно позитивными, а отрицательные последствия будут временными.

В период проведения работ в атмосферный воздух будет привноситься неорганическая пыль и продукты сгорания от строительной и передвижной техники. Нарушится состояние грунтов, почвенно-растительного покрова. Воздействие будет временным на эти компоненты среды с обратимыми последствиями.

Ремонт и строительство канализационных коллекторов, их очистка вызовут изменения режима работы канализационных коллекторов, что возможно ухудшит санитарно-гигиеническое состояние прилегающих территорий. Воздействие будет не продолжительное по времени с обратимыми последствиями.

Анализ показывает, что реализация проектных мероприятий позволит снизить: затраты по эксплуатации и техническому обслуживанию при устранении аварий, потери сточных вод/инфильтрацию грунтовых вод, количество санитарных «удобств» на участках, энергоемкость оборудования и потребление энергии.

В процессе реализации проекта реконструкции канализационных сетей и строительство очистных сооружений будут осуществляться следующие операции:

- выемка;
- насыпь и обратная засыпка;
- монтаж, демонтаж, обработка бетонных, металлических конструкций;
- укладка канализационных труб.

В процессе проведения строительных, ремонтных работ на канализационных очистных сооружениях (КОС), распределительных узлах и канализационных коллекторах будут образовываться строительные отходы, которые требуют применения надежной системы сбора, удаления, и их минимизации.

Образующейся в процессе очистки сточных вод, отходы с песколовок и ил при его удалении могут быть источником загрязнения почвы и поверхностных и грунтовых вод.

Песок из песколовок удаляется гидроэлеватором на песковые площадки. Ил может использоваться в качестве удобрения на хлопковых полях.

Следующие отходы сформируются во время ремонтно-восстановительных работ канализационной сети: отходы механической очистки коллекторов от насосов, состоящие из мусора, минеральных солей и органических веществ будут складироваться в полосе отчуждения и разравниваться бульдозером; земляные отходы от подготовки объектов для строительства коллекторов, которые будут использованы для обратной засыпки траншей; отходы материалов после ремонта поврежденных железобетонных и чугунных трубопроводов предусматривается сдавать Вторчермет или на переработку металлургический завод.

На рабочих объектах будут возникать различные типы твердых отходов, включая древесину, пластмассу, и картонные коробки из-под упаковки оборудования.

Смягчающие меры включают обеспечение контейнерами для сортировки твердых отходов. Картонные коробки под упаковки оборудования будут сдаваться в приемные пункты «Вторутильсырь», отработанную пластмассу - на ближайшие предприятия по переработке пластмасс.

Заправка горюче-смазочными материалами, обслуживание техники будет производиться исключительно на заправочных станциях, станциях техобслуживания. Искользованные масла и другие жидкие загрязняющие вещества будут складироваться в специально оборудованных для них местах и вывозиться на регенерацию на ближайшую нефтебазу.

Площадка строительства после окончания строительных - монтажных работ должны быть очищены от мусора и благоустроены. В случае разрушения асфальтового покрытия улиц необходимо будет выполнить его восстановление.

При необходимости вывоза и складирования излишнего грунта требуется получение разрешения управления городской или областной архитектуры с указанием места складирования.

При завозе щебня, гравия, песка для строительных работ, также требуется получение разрешения на использования площадок и карьеров. При проведении строительных работ транспортные перевозки должны осуществляться строго по выделенным проездам, чтобы исключить возможность разрушения плодородных слоев почвы.

Необходимо создание санитарных условий для строителей и их медицинское обслуживание. Контролеры участков обязаны ежедневно производить обходы площадок строительства и близлежащих территорий с целью визуального обследования за выполнением строителями природоохранных мероприятий в том числе не причинение вреда животным и растениям, сбор отходов и масел в специальные емкости и другие.

При эксплуатации канализационных сетей, станций перекачек после реконструкции ожидается улучшение отвода сточных вод, ликвидация утечек, что благоприятно повлияет на окружающую среду и здоровье населения, поскольку устранит инфильтрацию неочищенной сточной воды из канализационных труб в грунт, грунтовые воды.

Для снижения возможных негативных последствий воздействия проекта на окружающую среду в проекте ЗВОС разработан план смягчающих мер на период проведения работ, планы экологического мониторинга и управления за состоянием окружающей среды.

Экологическая экспертиза проекта показала соответствие материалов требованиям законодательных документов, предъявляемых к первому этапу оценки воздействия на окружающую среду. Из выше сказанного видно что, соблюдая все заложенные экологические мероприятия, производство не окажет существенного влияния на состояние природной среды района.

Из вышеуказанного Джизакская областная экологическая экспертиза **согласовывает** проект заявления о воздействии на окружающую среду (ЗВОС) для реконструкция канализационных сетей и очистных сооружений города Джизака Джизакской области, как удовлетворяющий требованиям законодательства.

До сдачи объекта в эксплуатацию следует разработать заявление об экологических последствиях (ЗЭП) с привязкой к конкретной территории и содержащее экологические нормативы и другую необходимую информацию, предусмотренную законодательством.

Заявление об экологических последствиях (ЗЭП) следует представить на государственную экологическую экспертизу в установленном законодательством порядке.

Контроль выполнения вышеуказанных требований возлагается отделу по охране природы г. Джизака.

М.П.

Председатель комитета:

Э. Холматов

Или 3 Арман
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Attachment 2. Environmental Management Plan as from IEE

The Environmental Management Plan Djizzak Sewage Treatment Facility Subproject: Environmental Mitigation Table (EmiT)

Environmental Impact/Issue	Mitigative Measures	Location ²	Time Frame	Responsibility	
				Implement ation	Supervisi on
CONSTRUCTION PERIOD					
1 Excessive construction-period air pollution	Emissions will be kept to a minimum by: 1. ensuring that the contractor's fleet of vehicles are properly maintained and 2. Use acceptable fuel and haul loads within specified limits. 3. Vehicle idling time limits to no more than 3 minutes and 4. equipment maintenance specifications will be imposed through construction inspection and regular reporting, 5. Dust control at the construction site will be particularly stringently controlled by watering, setting strict speed limits of no more than 30kph in or near settled areas, and clean-up of paved haul roads. 6. Equipment such as the diesel generator will be included in the emission control program and will be and regularly tuned to prevent excessive TPM/soot pollution.	Anywhere at construction sites where vehicles of the contractor or under the contractors control (including paying for services), such as subcontracted trucks hauling materials	Throughout the construction period	Contractor	PCU and Vodokana I
2 Excessive noise	Identify sensitive sites like hospitals, retirement homes, sanatoriums and urban park areas, then reduce noisy activities such as jack hammers during low noise periods and if needed set up temporary noise baffles.	All work areas within 250m of schools, sanatoriums , hospitals, playgrounds and residences	Undertake noise management throughout the construction period	Contractor	PCU and Vodokana I
3 Inadequate use of tree clearing and replanting plan prepared during pre-construction period	Contractor to be handed the tree cutting and replanting plan at the start of construction and carefully monitored- Contractor must review, update with the PCU then adhere to the plan A system of severe fines, involving replanting of mature trees, for cutting and damaging trees outside the cutting areas.	All areas were need to clear trees is being considered	Throughout the construction period	Contractor	PCU and Vodokana I

Environmental Impact/Issue	Mitigative Measures	Location ²	Time Frame	Responsibility	
				Implement ation	Supervisi on
	will be implemented. Any installations where there are mature roadside shade trees, designers will be contacted to realign the sewer into the road to avoid cutting				
4. Poor Haul Road Maintenance	The contractor will need to inspect roads used for transport of earthworks every day, making sure that debris waste materials and earth has not fallen off the back of trucks generating safety concerns and dust; and that immediate clean up occur if problems are noted.	All roads used by the contractor and, subcontract or	Throughout the construction period	Contractor	PCU and Vodokana I
5 Inadequate traffic management when sewer construction taking place	Traffic management will be essential since most of the sewer placement work will be in the middle or on one side of existing roads, requiring an effective traffic management operation. To that end contractors will require either automated lights or two flagmen at each major work area to help keep traffic from backing up too badly.	All roads were sewer construction is planned and where there is a regular traffic flow	At all times that construction is taking place	Contractor	PCU and Vodokana I
6 Failure to adhere to construction related good housekeeping practices, including solid and sanitary waste management and	Contractors will adhere to standard good housekeeping practices as defined in the contract Terms & Conditions and Contract Specifications. Special considerations will be given to 1. management of construction waste and water 2. equipment lubricants and fuel, including management and collection of waste oils and fuel particularly related to refuelling depots, maintenance areas and diesel generator sets. 3. Garbage will be collected and properly disposed of after recycling and sorting, This work will be completed in accordance with RoU norms and codes which the contractor will be expected to know, based on the information found in the IEE. Also, the contractor shall orient all construction workers in basic sanitation and health care issues occurring in the Djizzak area.	All work camps, construction maintenance yards and any other areas operated by the contractor and involved in the project	Throughout the construction period	Contractor	PCU and Vodokana I
7 Inadequate occupational	1. The contractor will provide personal safety equipment (PSE) such as	At all worksites of	At all times during the	Contractor	PCU and Vodokana

Environmental Impact/Issue	Mitigative Measures	Location ²	Time Frame	Responsibility	
				Implementation	Supervision
health and safety measures in the workplace	<p>hardhats, boots, noise protection, safety vests and eye protection where necessary, such as when welding, grinding or cutting.</p> <p>2. Fencing or safety ribbon will be required at every worksite, marking the boundary for safe viewing</p> <p>3. Sanitary toilet, washing and eating facilities (if needed) will be provided</p> <p>4. Safe potable water supply will be available at all times and within easy reach of workers</p> <p>5. Industrial grade first aid kits will be at every work site</p>	the contractor and any subcontractors	construction work		I
8 Failure to properly manage petroleum products such as fuel, lubricants, leading to spill and contamination.	<p>Contractor will be required to have the following spill prevention measures in place at all work sites:</p> <p>1. All fuelling to be done on a concrete surface provided with spill catch tank that can be cleaned and all spilled fuel recovered and recycled based on discussions with fuel supplier.</p> <p>2. All repair and maintenance work must either be done on a concrete surface with oil spill catch basin or oil catch pans must be provided at all service areas and training provided to all 'mechanics'.</p> <p>3. All fuel use areas where spills and leakage is possible, e.g. the generator, must have drip basins installed to prevent any leakage. These recovered materials must be recycled.</p> <p>4. A fuelling areas must be equipped with proper fuel nozzles</p> <p>5. All fuel tanks must have means for containment of accidental spills.</p> <p>6. Any spills must be cleaned up according to RoU norms and codes within 24 hours of the occurrence, with contaminated soils and water treated according to RoU norms and codes.</p>	At maintenance yards and any other areas that the contractor uses or subcontractor use during the construction period	Throughout the construction period	Contractor	PCU and Vodokana I
9 Contractor does not provide	At start of construction period the contractor will be given and schedule for	At start of construction	Quarterly and semi-	Contractor	PCU and Vodokana

Environmental Impact/Issue	Mitigative Measures	Location ²	Time Frame	Responsibility	
				Implement ation	Supervisi on
quarterly monitoring updates or monitoring checklists or semi-annual summary reports or final construction period EMP implementation report	report submission and during the training period samples of the reports required will be presented.	period	annually as well as at the end of the construction period		I
10 Post sewer installation rehabilitation and landscaping	Immediately after the placement if a section of sewer the contractor must immediately rehabilitate and re-landscape the area to preconstruction conditions, including re-establish access.	All sewer placement sites	At all times	Contractor	PCU and Vodokana I

Attachment 3. Environmental Monitoring System as from IEE
Environmental Monitoring Table (EMoT)

ITEM	Mitigative Action	Monitoring Details/Also Performance Indicators	Timing	Executing Unit	Reporting Responsibility
CONSTRUCTION PERIOD -prepare and use this section as construction monitoring checklist					
1 Excessive construction-period air pollution	Emissions will be kept to a minimum by: 1. ensuring that the contractor's fleet of vehicles are properly maintained 2. Use acceptable fuel and haul loads within specified limits. 3. Vehicle idling time limits to no more than 3 minutes and 4. equipment maintenance specifications will be imposed through construction inspection and regular reporting, 5. Dust control at the construction site will be particularly stringently controlled by watering, setting strict speed limits of no more than 30kph in or near settled areas, and clean-up of paved haul roads. 6. Equipment such as the diesel generator will be included in the emission control program and will be and regularly tuned to prevent excessive TPM/soot pollution.	Inspect 6 issues as defined in EmiT and provide contractor with feedback	Regularly	Contractor	PCU
2 Excessive noise	Identify sensitive sites like hospitals, retirement homes, sanatoriums and urban park areas, then reduce noisy activities such as jack hammers during low noise periods and if needed set up temporary noise baffles.	Measure noise levels at sensitive receptor sites and discuss non-compliance with contractor. Noise to be measured when equipment operating, 08:00-10:00 and 15:00-16:00. Confirm that no work is done near sensitive sites after 18:30	Regularly	Vodokanal/Contractor	PCU

ITEM	Mitigative Action	Monitoring Details/Also Performance Indicators	Timing	Executing Unit	Reporting Responsibility
3 Inadequate use of tree clearing and replanting plan prepared during pre-construction period	<p>Contractor to be handed the tree cutting and replanting plan at the start of construction and carefully monitored- Contractor must review, update with the PCU then adhere to the plan</p> <p>A system of severe fines, involving replanting of mature trees, for cutting and damaging trees outside the cutting areas, will be implemented.</p> <p>Any installations where there are mature roadside shade trees, designers will be contacted to realign the sewer into the road to avoid cutting</p>	Inspect construction areas to insure that tree cutting is avoided wherever possible and organize immediate meeting with PCU to discuss any noncompliance.	When work at a new site begins	Contractor and Vodokanal	PCU
4. Poor Haul Road Maintenance	The contractor will need to inspect roads used for transport of earthworks every day, making sure that debris waste materials and earth has not fallen off the back of trucks generating safety concerns and dust; and that immediate clean up occur if problems are noted.	Inspect haul roads at least weekly and report condition. PCU to conduct random inspections as well.	Regularly	Contractor and Vodokanal	PCU
5 Inadequate traffic management when sewer construction taking place	Traffic management will be essential since most of the sewer placement work will be in the middle or on one side of existing roads, requiring an effective traffic management operation. To that end contractors will require either automated lights or two flagmen at each major work area to help keep traffic from backing up too badly.	Drive construction roads and report on traffic management- and report excessive delays and suggest corrective actions	At all times that work is going on	Contractor and Vodokanal	PCU

ITEM	Mitigative Action	Monitoring Details/Also Performance Indicators	Timing	Executing Unit	Reporting Responsibility
6 Failure to adhere to construction related good housekeeping practices, including solid and sanitary waste management and	Contractors will adhere to standard good housekeeping practices as defined in the contract Terms & Conditions and Contract Specifications. Special considerations will be given to 1. management of construction waste and water 2. equipment lubricants and fuel, including management and collection of waste oils and fuel particularly related to refuelling depots, maintenance areas and diesel generator sets. 3. Garbage will be collected and properly disposed of after recycling and sorting, The contractor shall brief all construction workers in basic sanitation and health care issues occurring in the Djizzak area.	Inspect construction work areas and report the 3 items listed	At all times that work is going on	Contractor and Vodokanal	PCU
7 Inadequate occupational health and safety measures in the workplace	1. The contractor will provide PSE such as hardhats, boots noise protection, safety vests and eye protection where necessary, such as when welding, grinding or cutting. 2. Fencing or safety ribbon will be required at every worksite, marking the boundary for safe viewing 3. Sanitary toilet, washing and eating facilities (if needed) will be provided 4. Safe potable water supply will be available at all times and within easy reach of workers 5. Industrial grade first aid kits will be at every work site	Inspect construction work areas and report on the 5 items listed	At all times that work is going on	Contractor and Vodokanal	PCU

ITEM	Mitigative Action	Monitoring Details/Also Performance Indicators	Timing	Executing Unit	Reporting Responsibility
8 Failure to properly manage petroleum products such as fuel, lubricants, leading to spill and contamination.	Contractor will be required to have the following spill prevention measures in place at all work sites: 1. All fuelling to be done on a concrete surface provided with spill catch tank that can be cleaned and all spilled fuel recovered and recycled based on discussions with fuel supplier. 2. All repair and maintenance work must either be done on a concrete surface with oil spill catch basin or oil catch pans must be provided at all service areas and training provided to all 'mechanics'. 3. A fuelling areas must be equipped with proper fuel nozzles 4. All fuel tanks must have means for containment of accidental spills. 5. Any spills must be cleaned up according to RoU norms and codes within 24 hours of the occurrence, with contaminated soils and water treated according to RoU norms and codes.	Inspection undertaken regularly and report filed, addressing the 5 points listed	At all times that work is going on	Contractor and Vodokanal	PCU
9 Contractor does not provide quarterly monitoring updates or monitoring checklists or semi-annual summary reports or final construction period EMP implementation report	At start of construction period the contractor will be given and schedule for report submission and during the training period samples of the reports required will be presented.	Remind contractor of this requirement and collect reports	Quarterly	Contractor and Vodokanal	PCU
10 Post sewer installation rehabilitation and landscaping	Immediately after the placement if a section of sewer the contractor must immediately rehabilitate and re-landscape the area to preconstruction conditions, including re-establish access	Inspection of all installation sites, interview with local people to gauges how well the rehabilitation was done, prepare checklist, type report	As soon as an installation area has been cleared by contractor and rehabilitation is done	Contractor and Vodokanal	PCU

Attachment 4.

Quarterly Compliance Monitoring Checklist for Contractor: For Construction Period

Construction Period Impact	Mitigation Measure	Monitoring Action	When, frequency and duration?	Output provided?
<p>1 Excessive construction-period air pollution</p>	<p>Emissions will be kept to a minimum by:</p> <ol style="list-style-type: none"> 1. ensuring that the contractor's fleet of vehicles are properly maintained 2. Use acceptable fuel and haul loads within specified limits. 3. Vehicle idling time limits to no more than 3 minutes and 4. equipment maintenance specifications will be imposed through construction inspection and regular reporting, 5. Dust control at the construction site will be particularly stringently controlled by watering, setting strict speed limits of no more than 30kph in or near settled areas, and clean-up of paved haul roads. 6. Equipment such as the diesel generator will be included in the emission control program and will be and regularly tuned to prevent excessive TPM/soot pollution. 	<p>Inspect 6 issues as defined in EmiT and provide contractor with feedback</p>	<p>At all times that work is going on</p>	<p>Monitoring and analyzing of atmospheric pollution on dust, toxic materials and gas from construction vehicle shows that the emissions do not exceed the norm for atmospheric pollution.</p> <p>Appropriate measures were taken to prevent the pollution of atmospheric air, to limit the dust level from working vehicles and enforce strict observance of safety rules at main road crossing, along main roads and the makhalla streets.</p> <p>Construction works conducted during day time from 09:00 am to 06:00 pm. To limit the dust at the construction sites adjacent to the sites area (roads) being watered in a due time.</p> <p>As a result of the analysis of ground-level concentrations of polluting substances, it is not revealed the air pollution that exceeds the level of quotas.</p>

Construction Period Impact	Mitigation Measure	Monitoring Action	When, frequency and duration?	Output provided?
2 Excessive noise	Identify sensitive sites like hospitals, retirement homes, sanatoriums and urban park areas, then reduce noisy activities such as jack hammers during low noise periods and if needed set up temporary noise baffles.	Measure noise levels at sensitive receptor sites and discuss non-compliance with contractor. Noise to be measured when equipment operating, 08:00-10:00 and 15:00-16:00. Confirm that no work is done near sensitive sites after 18:30	At all times that work is going on	<p>Construction works conducted during day time from 09:00 am to 06:00 pm.</p> <p>The chief of a site of the Contractor - provides conformity of EMP, visually inspects safe use of the equipment, noise level of vehicles and mechanisms. The mechanical engineer of a site checks a technical condition of the mechanisms that the Contractor has.</p> <p>The work carried out to inspect the noise level has shown that the noise level at the construction site is not excessive noise levels established by SanPINUz No.01-20-07-Sanitary standards for permissible noise levels in the workplace. Noise levels comply with the limits SanPINUz No.01-20-07 that is 32 dB at a rate of 65-80 dB (decibel).</p> <p>Noise and vibration corresponds to the State sanitary standards of acceptable noise levels on construction sites. The project doesn't produce any significant negative environmental impacts.</p>

Construction Period Impact	Mitigation Measure	Monitoring Action	When, frequency and duration?	Output provided?
3 Inadequate use of tree clearing and replanting plan prepared during pre-construction period	<p>Contractor to be handed the tree cutting and replanting plan at the start of construction and carefully monitored- Contractor must review, update with the PDC then adhere to the plan</p> <p>A system of severe fines, involving replanting of mature trees, for cutting and damaging trees outside the cutting areas, will be implemented.</p> <p>Any installations where there are mature roadside shade trees, designers will be contacted to realign the sewer into the road to avoid cutting</p>	Inspect construction areas to insure that tree cutting is avoided wherever possible and organize immediate meeting with PCU to discuss any noncompliance.	When work at a new site begins	According to the draft LARP there are no trees in the lines of networks. No tree cutting plan needed for the Contractor.
4 Poor Haul Road Maintenance	The contractor will need to inspect roads used for transport of earthworks every day, making sure that debris waste materials and earth has not fallen off the back of trucks generating safety concerns and dust; and that immediate clean up occur if problems are noted.	Inspect haul roads at least weekly and report condition. PDC to conduct random inspections as well.	At all times that work is going on	The Contractor inspected roads used for transport of earthworks regularly.
5 Inadequate traffic management when sewer construction taking place	Traffic management will be essential since most of the sewer placement work will be in the middle or on one side of existing roads, requiring an effective traffic management operation. To that end contractors will require either automated lights or two flagmen at each major work area to help keep traffic from backing up too badly.	Drive construction roads and report on traffic management and report excessive delays and suggest corrective actions	At all times that work is going on	The Contractor used proper special warning signals and safety tapes arranged

Construction Period Impact	Mitigation Measure	Monitoring Action	When, frequency and duration?	Output provided?
6 Failure to adhere to construction related good housekeeping practices, including solid and sanitary waste management and	<p>Contractors will adhere to standard good housekeeping practices as defined in the contract Terms & Conditions and Contract Specifications. Special considerations will be given to</p> <ol style="list-style-type: none"> 1. management of construction waste and water 2. equipment lubricants and fuel, including management and collection of waste oils and fuel particularly related to refuelling depots, maintenance areas and diesel generator sets. 3. Garbage will be collected and properly disposed of after recycling and sorting, <p>The contractor shall brief all construction workers in basic sanitation and health care issues occurring in the Djizzak area.</p>	Inspect construction work areas and report the 3 items listed	At all times that work is going on	<p>The Contractor regularly held meetings with the workers to adhere to standard good housekeeping practices, management of construction waste, use and collect of fuel.</p> <p>The Contractor has official agreement with the local communal services on removal of construction and domestic wastes to the municipal landfill. Depending to the stage of construction/rehabilitation and remoteness of construction site from closest community, removal was done once per week or 10 days.</p>
7 Inadequate occupational health and safety measures in the workplace	<ol style="list-style-type: none"> 1. The contractor will provide PSE such as hardhats, boots noise protection, safety vests and eye protection where necessary, such as when welding, grinding or cutting. 2. Fencing or safety ribbon will be required at every worksite, marking the boundary for safe viewing 3. Sanitary toilet, washing and eating facilities (if needed) will be provided 4. Safe potable water supply will be available at all times and within easy reach of workers 5. Industrial grade first aid kits will be at every work site 	Inspect construction work areas and report on the 5 items listed	At all times that work is going on	<p>The Contractor provided PSE. Safety ribbon provided at every worksite. Safe potable water was available at all times and within easy reach of workers. First aid kits were available at every work site.</p>

Construction Period Impact	Mitigation Measure	Monitoring Action	When, frequency and duration?	Output provided?
8 Failure to properly manage petroleum products such as fuel, lubricants, leading to spill and contamination.	Contractor will be required to have the following spill prevention measures in place at all work sites: 1. All fuelling to be done on a concrete surface provided with spill catch tank that can be cleaned and all spilled fuel recovered and recycled based on discussions with fuel supplier. 2. All repair and maintenance work must either be done on a concrete surface with oil spill catch basin or oil catch pans must be provided at all service areas and training provided to all 'mechanics'. 3. A fuelling areas must be equipped with proper fuel nozzles 4. All fuel tanks must have means for containment of accidental spills. 5. Any spills must be cleaned up according to RoU norms and codes within 24 hours of the occurrence, with contaminated soils and water treated according to RoU norms and codes.	Inspection undertaken regularly and report filed, addressing the 5 points listed	At all times that work is going on	The Contractor regularly held meetings with the workers to adhere to standard good housekeeping practices, management of construction waste, use and collect of fuel. During works they complied with spill prevention requirements.
9 Contractor does not provide quarterly monitoring updates or monitoring checklists or semi-annual summary reports or final construction period EMP implementation report.	At start of construction period the contractor will be given and schedule for report submission and during the training period samples of the reports required will be presented.	Remind contractor of this requirement and collect reports	As per the reporting schedule	For the construction period April-October 2016 the Contractor submitted two EMRs for April – May and June – September.
10 Post sewer installation rehabilitation and landscaping	Immediately after the placement if a section of sewer the contractor must immediately rehabilitate and re-landscape the area to preconstruction conditions, including re-establish access.	Inspection of all installation sites, interview with local people to gauge how well the rehabilitation was done-prepare checklist-type report	All sites immediately after contractor leaves the site	In the Completion Audit Report will be provided the inspection results, completion checklists.

Attachment 5
Weekly waste disposal list

УВЕДОМЛЕНИЕ О ПЕРЕДАЧЕ ОТХОДОВ	
Номер Отправки (Сноска): (место -мусоросвалка г.Джизак-год-2016 -следующий №.6)	
РАЗДЕЛ А ХАРАКТЕРИСТИКИ ОТХОДОВ 1. Тип отходов; 2. Как отходы хранятся? 3. Объем отходов?	1. [ТБО и строительные отходы] 2. [Размер емкости для ТБО – 0,90*0,990*1,50 вместимость отхода в емкость 210 кг] 3. [Общий объем отхода – ТБО 0,05 тн, строительные отходы – 0,4 тн.]
РАЗДЕЛ Б ПРОИЗВОДИТЕЛЬ ОТХОДОВ 1. Подрядчик; 2. Стройплощадка; 3. Менеджер Отходов;	1. [ООО «Файзкоммуналкурилиш»] 2. [Наименование предприятия- «Реконструкция и строительства канализационных сетей по проспекту Халилвар Дуслиги (D=600 мм, L=1,1 км.) и от махалли Дуслик (D=400 мм, L=0,45 км.)»] 3.
РАЗДЕЛ В ПЕРЕВОЗЧИК ОТХОДОВ 1. ФИО; 2. Компания;	1. [Хужамов М.] 2. [Управления «Ободонлаштириш» г.Джизак]
РАЗДЕЛ Д - ПЕРЕДАЧИ ПОДРОБНОСТИ ОТХОДОВ 1. Дата и время передачи отходов; 2. Наименование предприятия по размещению отходов; 3. Подпись в получении предприятием по размещению отходов;	1. [31 мая 2016 года, 12:00] 2. [Управления «Ободонлаштириш» г.Джизак] 3. [ М.Хужамов]
РАЗДЕЛ Е - ПОДПИСИ [Представитель Подрядчика 	[Перевозчик Отходов

Копия 1: Подрядчику Строительства

Копия 2: Перевозчику

Вернуть специалисту по экологическим вопросам после получения подписи в Разделе Д.,

Пункт 3.

Attachment 6
Monitoring of waste disposal, noise level and air quality

Приложение 3. Формуляр инспектирования Управления Отходами
 Формуляр инспектирования Участка

Меры Контроля	Соответствие (Да/Нет)	Примечание
Все Потоки Отходов правильно разделены и помечены по следующим категориям?		
- Твёрдые опасные отходы	такие отходы на промплощадке не имеется	
- Жидкие опасные отходы	такие отходы на промплощадке не имеется	
- Неопознанные отходы	такие отходы на промплощадке не имеется	
Инвентаризация отходов новая?	да	
Опасные и неопасные отходы хранятся раздельно?	Опасные отходы не имеется, неопасные отходы хранится отдельно.	
Все отходы хранятся согласно Плану хранения и замены нефти, топлива, химикатов?	да	
Есть ли карта, показывающая точки правильного хранения отходов с указанием на строительном плане, чтобы сделать их доступными и видимыми всем рабочим?	да	
Все контейнеры для хранения отходов помечены для предотвращения взаимного загрязнения материалов?	да	
Все ярлыки отходов обладают полной информацией, включая: Поток Отходов (общие, опасные, Неопасные, медицинские отходы и так далее)?	да	
- Тип отходов (твёрдые, жидкие или шлам);	твёрдые	
- Объём отходов;	5,6 тн	
- Известные угрозы для окружающей среды, здоровья и безопасности (например, спецификации материальной безопасности);	да	
- Личное защитное оборудование (ЛЗО), если требуется	Не требуется	
Лицензия перевозчика отходов?	лицензия не требуется	
Завершён ли мониторинг уведомления о передаче отходов?	да	

Приложение 4. Контрольный лист проверки шума на местах

Контрольный лист проверки шума на местах

Меры контроля	Соответствие(Да/Нет)	Примечания
Выключается ли периодически используемая установка, если не функционирует?	да	
Выключают ли двигатели транспортные средства на месте эксплуатации, когда не работают?	да	
Располагаются ли дизельные установки как можно дальше от периметра границ проекта?	да	
Имеет ли строительная установка глушители звука на месте (например, глушитель выхлопа, шумоглушитель, экраны)?	нет	
Надевает ли весь персонал соответствующие средства индивидуальной защиты, такие как средства защиты органов слуха?	нет	
Есть ли ограничения по передвижению транспортных средств в дневное время?	да	

Attachment 7 Site Photos



Fig. 1 - GRM logbooks



Fig. 2 - Informative Banner with brief description and objectives of project, implementers, schedule of construction works, deadlines and contact information



Fig. 3 – site management



Fig.4 – First aid kit



Fig.6 – road signs arranged



Fig.5 –safety tapes arranged

Attachment 8
Post-Construction Environmental Audit Checklist

No.	Activity	Impacts	Measure/s suggested as per	Check	Measures Implemented
1	Project site vegetation rehabilitation (re-vegetation)	Change of land cover, erosion resulting from the construction activities	Plantation and vegetation measures (trees, grass etc.)	✓	The construction sites were located in the area which is not related to the protected area, according to national legislation. The impact on flora and fauna in the project areas was minimal. All works were monitored and controlled in accordance with the EMP. No greening and planting activities required by the project.
			Proper landscaping with drainage	✓	
2	Waste management	Waste accumulation, air and soil pollution	Construction debris removed; Collect and disposal all wastes at designated location; Scrap metals properly stored to be sent to designated organization for recycling	✓	Old metal pipes are not dug out. The Contractor not damaged the asphalt cover of roads according to the project design. They excavated new trenches at the road-side for new pipe laying. According to the reports provided during the construction period the Contractor timely removed and recycled construction waste by "Maxsustrans" Ltd on contractual bases.
3	Oil management	Equipment and machinery repairing	Avoid oil spill to open soil. Repair works to be taken on concrete cover area.	✓	Equipment and machinery repairing during construction was located in the garage (auto repair shop)
4	Road reinstatement	Road damages causing pollution, traffic disturbance and accidents	Streets with installed network reinstated to pre-construction or better conditions	✓	After full completion of the construction all corridors of the sewage supply pipes were restored. Since the Contractor not dug out old metal pipes, they did not damage the asphalt cover of roads according to the project design. They excavated new trenches at the road-side for new pipe laying.
			Trees replanted as needed	✓	Trees were not cut during the construction works

No.	Activity	Impacts	Measure/s suggested as per	Check	Measures Implemented
5	Borrow sites and quarries	Land slide, soil erosion, change in riverbed and landscape, accidents	Borrow sites and quarries restored	✓	There were no borrow sites used on the sites. All construction materials were delivered by the licensed suppliers.
6	Existing Infrastructure facilities	Damage or disturbance to existing services (supply of electricity, water, gas, telecom etc.)	Reinstatement to pre-construction conditions or proper relocation, to be certified by the service companies	✓	Existing infrastructure facilities that have impact were reinstated and certified by respective authority.
7	Camp site facilities	Residual pollution and disturbance to the localities	All temporary facilities removed and cleaned up	✓	There were not construction camps on sites.

Attachment 9
State Accepting Committee Act

АКТ
ГОСУДАРСТВЕННОЙ ПРИЁМОЧНОЙ КОМИССИИ О ПРИЁМКЕ В ЭКСПЛУАТАЦИЮ
ЗАКОНЧЕННОГО СТРОИТЕЛЬСТВОМ ОБЪЕКТА

от «19» сентября 2016 г. город Джизак, Джизакской области
(местонахождение объекта)

Государственная приёмочная комиссия, назначенная решением Хокима города Джизака от «14» сентября 2016 г. № 1312

(наименование органа, назначившего комиссию)

руководствуясь правилами, изложенными в ШНК 3.01.04-04

УСТАНОВИЛА:

1. Заказчиком Жиззах ДУК «Сувобава» совместно с
Генподрядчиком - консорциум ООО «Файз коммунал курилиш» и ООО «Жиззах
полимер пласт»

(наименование организации и ее ведомственная подчиненность)

Предъявлена к приёмке в эксплуатацию «Реконструкция и строительство
канализационных сетей по проспекту Халклар Дуслиги (D=600mm, L=1.1 km) и от
махалли Дуслик (D=400mm, L=0.45km)»

населенных пунктах города Джизака Джизакской области
(наименование объекта и вид строительства, новое, расширение, реконструкция, техническое перевооружение)

по адресу: город Джизак Джизакской области.
(область, район, населенный пункт, микрорайон, квартал, улица, номер дома (корпуса))

2. Строительство осуществлено на основании постановления Президента РУз.
от «11» декабря 2015г. № ПП-2447

Строительство осуществлено генеральным подрядчиком
консорциум ООО «Файз коммунал курилиш» и ООО «Жиззах полимер пласт»
(наименование организации)

Выполнившим Строительство канализационных сетей
(виды работ)

И субподрядными организациями
(виды работ, выполненные каждой организацией)

(при числе организаций свыше трех, перечень их указывается в приложении ... к акту)

3. Проектная документация на строительство разработана генеральным
проектировщиком ООО «Казар»
(наименование организации)

Выполнившим проектно-сметная документация
(наименование частей или разделов документации)

4. Исходные данные для проектирования выданы
ГУП «UZGASHKLIT»
(наименование научно-исследовательских и изыскательских организаций)
5. Строительство осуществлялось по проекту (типовому, индивидуальному, повторно применяемому) DS-WW-03/01
(номер проекта, номер серии)
6. Проектная документация утверждена
Экспертным заключением Госстроя Республики Узбекистан (наименование органа, утвердившего документацию на объект)
«14» декабря 2015г. № 625-Э
7. Строительно-монтажные работы осуществлены в сроки:
начало работ март 2016г; окончание работ сентябрь 2016г
(месяц и год) (месяц и год)
При продолжительности строительства, мес.:
По норме или по ПОС 6 месяцев фактически 6 месяцев
8. Государственной комиссии представлена следующая документация:
Исполнительная документация, сертификаты, акты скрытых работ, акты испытаний
(перечень документов в соответствии с в.4.9 СНиП 3.01.04-04)
*Указанные документы являются обязательным приложением к настоящему акту.
9. Предъявленный к приёмке в эксплуатацию объект имеет следующие основные показатели мощности, производительности, производственной площади, протяженности, вместимости, объёма, пропускной способности, провозной способности, число рабочих мест и т.п. (заполняется по всем объектам (кроме жилых домов) в единицах измерения соответственно целевой продукции или основным видам услуг):

Мощность, производительность и т.д.	Единица измерения	По проекту		Фактически	
		Общая (с учетом ранее принятых)	В том числе пускового комплекса или очереди	Общая (с учетом ранее принятых)	В том числе пускового комплекса или очереди
Коллекторы и канализационные сети d-600мм~400мм	Км		1.5		1.5

10. Технические и архитектурно-строительные решения по объекту характеризуются следующими данными:

(краткие технические характеристики по особенностям его размещения, по

планировке, этажности, основным материалам и конструкциям, инженерному и технологическому оборудованию)

11. На объекте установлено предусмотренное проектом оборудование в количестве согласно актам о его приёмке после индивидуального испытания и комплексного опробования

12. Мероприятия по охране труда, обеспечению взрывобезопасности, пожаробезопасности, охране окружающей природной среды и антисейсмические мероприятия, предусмотренные проектом

согласно проекта
(сведения о выполнении)

Характеристика мероприятий приведена в приложении к акту.

13. Внешние наружные коммуникации холодного и горячего водоснабжения и связи обеспечивают нормальную эксплуатацию объекта и приняты городскими эксплуатационными организациями.
Перечень справок городских эксплуатационных организаций приведен в приложении к акту.

14. Работы по озеленению, устройству верхнего покрытия подъездных дорог к зданиям, тротуаров, хозяйственных, игровых и спортивных площадок, а также отделке элементов фасадов зданий должны быть выполнены:

Виды работ	Ед.изм.	Объем работ	Срок выполнения
Асфальтирование	м2	3068.0	01.09.2016-20.09.2016

15. Общая стоимость в текущих ценах:

Всего 2 126 496,1 тыс.сум (767 789,30 долларов США), в том числе:
Строительно-монтажных работ 2 126 496,1 тыс.сум (767 789,30 долларов США),
Оборудования, инструмента и инвентаря – 0.

16. Стоимость основных фондов, принимаемых в эксплуатацию

Всего 2 126 496,1 тыс.сум (767 789,30 долларов США), в том числе:
Строительно-монтажных работ 2 126 496,1 тыс.сум (767 789,30 долларов США),
Оборудования, инструмента и инвентаря – 0.

17. На основании осмотра объекта и ознакомления с соответствующей документацией даны оценки прогрессивности решений:

Технологических

хорошо
(по жилым домам не заполняется)

РЕШЕНИЕ ГОСУДАРСТВЕННОЙ ПРИЁМОЧНОЙ КОМИССИИ

Предъявленный к приёмке «Реконструкция и строительство канализационных сетей по проспекту Халклар/Дустлиги (D=600mm, L=1.1 km) и от махалли Дустлик (D=400mm, L=0.45km) населенных пунктов города Джизака Джизакской области (Приложение №1)

(наименование объекта)

ПРИНЯТЬ В ЭКСПЛУАТАЦИЮ

ПРЕДСЕДАТЕЛЬ КОМИССИИ:

Заместителя хокима города Джизака.

Ортиков С.

ЗАМЕСТИТЕЛЬ ПРЕДСЕДАТЕЛЯ КОМИССИИ

И.о. Руководителя ГАСН Джизакской области

Рахматов Г.

ЧЛЕНЫ КОМИССИИ:

Региональный координатор по реализации проектов в
Джизакской области ГКП
Агентства «Узкоммунхизмат»

Абдусаттаров С.

Председатель комитета охраны природы
города Джизака

Мингбоев К.

Главврач СЭС города Джизака.

Ибодов Ф.

Начальник городского управления по Архетектуре
и строительству города Джизака

Тогаев С.

Главный инженер ДУК «Сувокава»

Мухиддинов А.

Начальник отдела инвестиций и капитального
строительства ДУК «Сувокава»

Юсупов А.

Государственный технический инспектор труда
главного управления Джизакской области

Мирзакаримов С.

Начальник производственно технического
отдела ДУК «Сувокава»

Рахмонбердиев Б.

Инженер проекта ООО «Казар»

Рузимуродов У.

Директор ООО «Файз коммунал қурилиш»

Абдумажидов Х.

