Environmental Monitoring Report

Semi-Annual
Project number: 44458–013
Loan/Grant Number: 3025, 3026
August 2019
Period covered: January–June 2019

UZB: Amu Bukhara Irrigation System Rehabilitation Project

Prepared by Saban Cimen, JV Temelsu International Engineering Services Inc. Sheladia Associates Inc. for the Republic of Uzbekistan and the Asian Development Bank.

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Uzbekistan: Amu Bukhara Irrigation System Rehabilitation Project

(Financed by the ADB Loan 3025-UZB/ 3025-UZB)

Prepared by: Saban Cimen

JV Temelsu International Engineering Services Inc. Sheladia Associates Inc Tashkent, Uzbekistan

For the: Ministry of Water Resources of Uzbekistan Republic
Project Implementation Unit

Endorsed by: Mete Çilek/A. Nurettin Demir 08/07/2019

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ABBREVIATIONS

ABIS	Amu Bukhara Irrigation System
ADB	Asian Development Bank
BISA	Basin Irrigation System Administration
EEC	Environmental Expert of Consultant
EIA	Environmental Impact Assessment
EHS	Environment, Health and Safety
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
EMMP	Environmental Management and Monitoring Plan
EMR	Environmental Monitoring Report
GoU	Government of Uzbekistan
HGME	Hydrogeological Meliorative Expedition
IA	Implementing Agency
IEE	Initial Environmental Examination
ISA	Irrigation System Administration
MAWR	Ministry of Agriculture and Water Resources
M&ES	Monitoring and Evaluation Specialist
NPC	Nature Protection Committee
PIU	Project Implementation Unit
SE	Site Engineer
SC	Supervision Consultant
SO	Safeguards Office
WCA	Water Consumers' Association

1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for AMU BUKHARA IRRIGATION SYSTEM REHABILIATION PROJECT.

2. This report is the 8th EMR for the project.

1.2 Headline Information

3. In order to realize a sustainable and reliable water supply in ABIS, the Project is expected to achieve the following outputs:

   a) Construction of one new pump station, and modernization and rehabilitation of four existing ones;
   b) Increase in the conveyance efficiency of the main canal of ABIS;
   c) Increase in the capacity of Basin Irrigation System Administration (BISA), Irrigation System Administrations (ISAs), water consumers' associations (WCAs), and farmers to adapt to climate change; and
   d) Efficient management of project and ABIS

4. The Ministry of Agriculture and Water Resources (MAWR) has agreed to implement the Environmental Management Plan (EMP) and submit regular reports on its implementation. The Initial Environmental Examination Report (IEE) report, including the EMP, has been published on the Asian Development Bank (ADB) website. During project implementation, ADB and Japan International Cooperation Agency (JICA) will each be responsible for safeguard compliance in their respective project activities

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

5. The Amu Bukhara Irrigation System (ABIS) Rehabilitation Project is located in the central part of Uzbekistan on the right bank of Amu Darya River bordering to Turkmenistan. Bukhara is 563 km far from the capital Tashkent. The project covers lands of Bukhara and Navoi provinces. The ABIS is very important for the area and gives life as an oasis.

6. The ABIS supplies water to already irrigated lands, cities, settlements, and industries in Bukhara and Navoi provinces through a series of large cascading pump stations and thousands of kilometres of conveyance canals. It also drains the excess water through drainage system outside of the project area.

7. The ABIS, with a command area of 315,000 ha, serves the irrigated lands of the Bukhara Zarafshan and Karakul oases and the Karaul Bazar massif. The population in the ABIS command area is about 1,788,000 people, including 1,550,000 in Bukhara and 239,000 in two districts of Navoi, of which 68% live in rural areas and fully rely on irrigated agriculture. It is very important to supply reliable water to these people in the region. ABIS also supplies water for municipal and industrial purposes.

8. The aim of the Project is to improve the irrigated agriculture and water resources management in the ABIS, with the goal of promoting sustainable economic and social welfare of communities dependent upon ABIS. The Project objectives are

   a) modernization and rehabilitation of obsolete pump stations;
   b) increase of conveyance efficiency in ABIS main canal;
   c) increase climate change adaptation capacity; and
   d) increase efficiency of project management and irrigation system management.

2.2 Project Contracts and Management

9. A list or table of main organizations involved in the project and relating to Environmental Safeguards is Table 1given below. It includes lender, borrower, PIU, Main Contractor/s and significant sub-contractors, environmental staff of various organizations with their names and contact details.

Table 2-1 Environmental Safeguards of ABISRP

Lender	
Organization:	Asian Development Bank
Environmental Stuff:	Feruza Insavalieva
Email:	finsavalieva@adb.org
Tel:	+998781401920
Borrower/PIU	Ministry of Water Resources of Uzbekistan Republic
Organization:	Project Implementation Unit
Environmental Stuff:	Mr. Sherzod Djuraev
Email:	abisr@mail.ru
Tel:	+998909733363
Supervision Consultant	
Organization:	JV Temelsu International Engineering Services Inc. Sheladia Associates Inc
Environment Specialist (International):	Mr. Saban Cimen
Email:	saban.cimen@temelsu.com.tr
Tel:	+998909663615
Environment Specialist (local):	Mr. Jakhongir Gadayev
Email:	jakhongir.gadaev@yahoo.com
Tel:	+998901745142
Contractors	
Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02)	
Consortium LLC "Kogon Suv Qurilish" and JSC "Amubukhorokanalkurilish"	
Environmental Stuff:	-
Email:	-
Tel:	-
Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03)	
Modernization & Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.01)	
Hebei Construction Group Co., Ltd, Hebei Province, China	
Environmental Stuff:	Mr. Miao Guowang
Email:	66326632@qq.com
Tel:	+998972812666
Modernization & Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.02)	
Hebei Construction Group Co., Ltd, Hebei Province, China	
Environmental Stuff:	Mr. Miao Guowang / Mr. Zhang Zehui
Email:	66326632@qq.com / 505735114@qq.com
Tel:	+998972812666/ +998997568278
Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04)	
Kogon Suv Qurilish LLC	
Environmental Stuff:	Mr. Izomov Amin Ashurovic
Email:	-
Tel:	-

10. The following organizations and/or staff will be responsible for environmental monitoring:

- Basin Irrigation System Authority of Regions
- Contractor of any Subcomponent
- Civil Engineer of Consultant
- Climate Change Mitigation Specialist
- Environmental Expert of Consultant
- Electrical Engineer of Consultant
- Ministry of Health
- Project Manager of Consultant
- Project Implementation Unit
- Water Consumer Associations

11. The key staff for the environmental management and monitoring activities Mrs. Shakhlo Naimova is the PIU's Monitoring and Evaluation Specialist (M&ES) has been replaced with Mr. Sherzod Djuraev. Mr. Djuraev has all responsibilities and tasks related to environment, land, social (including involuntary resettlement and indigenous people), and poverty and gender aspects in accordance with the environment and social safeguard documents and Summary Poverty Reduction and Social Strategy, all of which are project linked documents. Specifically, PIU Monitoring and Evaluation Specialist:

- takes responsibility for monitoring and evaluating performance targets and indicators with baselines indicated in the Design and Monitoring Framework of the project document for all dimensions with support from the implementation consultant;
- provides necessary guidance to the Poverty, Social and Gender Officer in the PIU of Bukhara to collect relevant information on poverty, gender, and social aspects in relation to the Design and Monitoring Framework of the project document and Summary Poverty Reduction and Social Strategy;

12. Additionally, in relation to the environmental aspects, with the support from the international consultant the environmental specialist will:

- ensure that Environmental Management Plan (EMP) is updated during detailed design completed,
- ensure that bidding documents include all requirement to implement IEE and its EMP;

- ensure that the bidder selected will have adequate resources to implement and update EMP;
- undertake safeguards monitoring activities and prepare safeguard reports to be submitted to ADB;
- ensure that all construction works will be taken place in the permanent land possession of ABISA;
- if additional land required for construction works, ensure that land acquisition and resettlement plan is prepared in accordance to ADB SPS 2009 as well as the Government law and regulation related with land acquisition; and
- ensure that other project-related tasks are complied with ADB SPS 2009 and Government requirement.
- to review and approve Site-Specific and Topic Specific Management Plans prepared by Construction Contractor.

13. PIU as responsible IA for the project recruited a Supervision Consultant (SC) – consortium: «Temelsu International Engineering Services Inc» and «Sheladia Associates Inc.». The International environmental expert (Saban Cimen) and national environmental specialist of Supervision Consultant (EEC) – Jakhongir Gadaev assist M&ES of PIU in the supervision of the construction activities under the Project.

14. The part of the work of the Environmental Experts of the Consultant is to develop a capacity building training program for Contractor's Environmental Officers in order to increase the implementation efficiency of environmental monitoring. The timing of this program will be just before the commencement of civil works. Environmental Experts of the Consultant will develop the content of training.

2.3 Project Activities During Current Reporting Period

15. The activities about the Amu Bukhara 1 New Pump Station (ABISR/ICB/01) during the reporting period was announcement of the bid on 10th of September 2018, arrangement of the pre-bid meeting on 3rd and 4th of October 2018. The bids were submitted on 25th of October 2018. The tender evaluation phase of the project has not been completed yet.

16. During the reporting period, the construction activities were implemented for the Contracts ABISRP-02 the intended completion date of contract was 12/04/2019. However, there are still remaining works under this contract. Therefore, extension of the Contract under negotiation.

17. Contracts for Kuyu Mazar Pump Station (ABISRP 03.1) and Kizil Tepa Pump Station (ABISRP 03.2) were signed and became effective by September 2017; the contractor of both contracts is the same company named Hebei Construction Group Co.Ltd. The contractor has mobilized to both sites design, site establishment and rehabilitation and construction works are on-going.

18. The main project activities carried out in the reporting period include the following:

Table 2-2 Construction Activities Carried out During Reporting Period (January 2019-June 2019)

Site	Construction Activity	Number of Workers	
		Maximum	Minimum
Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02)			
Agitma Regulator (Tashrabad)	Construction of Temporary By-pass Canal	5	2
	Construction of Regulating Structure		
Dvoynik Regulator (Alat)	ABMK 1 Regulating Structure	5	2
Rostguy	Shafirkan Regulating Structure	5	2
	Kalkanrut Regulating Structure		
	Rostguy Regulating Structure		
	Abumuslim Regulating Structure		
Djilvan Regulator (Djilvan)	Construction of Regulating Structure	5	2
Kharkhur Regulator	Shakhrud Regulating Structure	15	5
Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1)		50	20
Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2)		70	30

19. Photos of construction works is given in Annex II.

20. A map of construction sites during the report period are given at the Figure 2-1.

21. The construction work Dvoynik Regulator area, Kuyu Mazar and Kizil Tepa Pump stations have been started during 6th reporting period (January 2018- June 2018) and has not been fully completed yet.

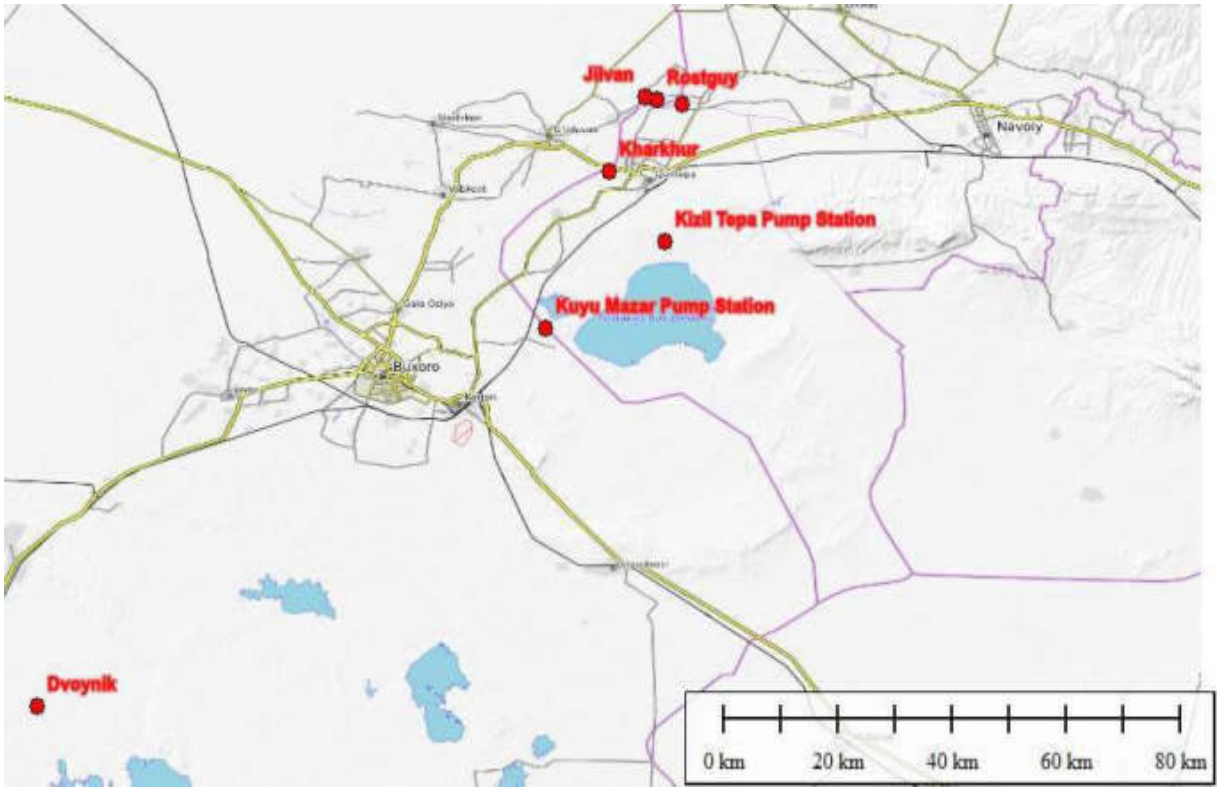


Figure 2-1 Map of Construction Sites Where Construction Activities Carried out During Reporting Period (January 2019-June 2019)

22. The construction work at Kharkhur Regulator area has been started during this reporting period.

23. The Contract ABISRP 04, with "Kogon Suv Qurilish" LLC was signed on 30th of June 2016. The Works had been substantially completed as of 22nd of October 2017. The as-built drawings were completed by the Contractor and the payment certificate on completion was issued.

24. No changes happened during the reporting period of the project design from that which was assessed in the Impact Assessment phase of the project and is set out in the Initial Environmental Examination/Environmental Impact Assessment.

2.4 Description of Any Changes to Agreed Construction methods

25. No changes to any construction processes have been observed during the construction period

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

26. The activities carried out by each of contractor's environmental manager during the reporting period have been summarized at the following table.

Table 3-1 Environmental Safeguards Activities Carried out During Reporting Period (January 2019-June 2019)

Environmental Safeguard Activities
ADB Mission composed of Ms. Ana Paula Araujo, Environment Specialist, CWOD-PSG/Mission Leader; Ms. Feruza Insavalieva, Associate Safeguards Officer, Uzbekistan Resident Mission (URM); Ms. Stephanie Sioson, Senior Operations Assistant, CWOD-PSG; Ms. Keti Dgebuadze, RETA 9541 International Environmental Consultant. - Environmental Safeguards Compliance Review of Amu Bukhara Irrigation System Rehabilitation Project (17-18/June/2019)
The International environmental expert (Saban Cimen) and national environmental specialist of Supervision Consultant (EEC) - Training of HSE Staff of Kuyu Mazar Pump Station (ABISRP 03.1), Kizil Tepa Pump Station (ABISRP 03.2) Contactors about Health and Safety Training (22/June/2019)
Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) (Responsible Environmental Manager: Not designated) - During the report period the contractor has not submitted any environmental monitoring reports, conducted training or activity etc. That is why any Environmental Safeguard Activity has not been observed during reporting period.
Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) (Responsible Environmental Manager: Miao Guowang) - Preparation of environmental monitoring reports (January, February, March, April, May) - Training of Working Staff on Environmental Issues - Updating the Environmental Impact Assessment Permission due to dredged material from forebay area of pumping stations.
Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) (Responsible Environmental Manager: Miao Guowang / Zhang Zehui) - Preparation of environmental monitoring reports (January, February, March, April, May) - Training of Working Staff on Environmental Issues. - Updating the Environmental Impact Assessment Permission due to dredged material from forebay area of pumping stations.

3.2 Site Audits

27. Regular site monitoring visits were carried out during the reporting period by PIU and Environmental Specialist of SC to check up realization of environmental protection measures parallel to civil works inspection as indicated below:

Table 3-2 Environmental Audits Carried out During Reporting Period (January 2019-June 2019)

Date	Conducted by	Purpose	Findings	Corrective Actions
Routine site visits	Supervision Consultant Site Engineers (SC)	General, Environmental and OHS	Usage of PPE has not been used in all	Daily check, and immediate cautions to the Contractors.
17-18.06.2019	ADB Mission Ms. A. P. Araujo (CWOD-PSG/Mission Leader); Ms. F. Insavalieva, Ass. (URM); Ms. S. Sioson (CWOD-PSG); Ms. K. Dgebuadze, (RETA 9541)	Environmental Safeguard Compliance of Amu Bukhara Irrigation System Rehabilitation Project	ABISRP 03.1 Kuyu Mazar Contractor needs to develop existing hazardous management and make use of PPE and improve the conditions of working environment. ABISRP 03.2 Kizil Tepa Contractor needs to construct hazardous storage and disposal area, improve the conditions of keeping the HSE training records. In both sites the environmental, HSE records will be kept in site. Local Environmental Expert of SC should be in duty.	See paragraph 106, 107, 108, 109
21.06.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 02 has almost completed construction activities except Kharkhur. No camp area exists in Kharkhur. PPE has not been used.	Daily check, and immediate cautions to the Contractor.

Date	Conducted by	Purpose	Findings	Corrective Actions
17-27.06.2019	Saban Cimen (SC)	Environmental Audit	ABISRP 03.1 Kuyu Mazar Contractor needs to develop existing hazardous management and make use of PPE and improve the conditions of working environment. ABISRP 03.2 Kizil Tepa Contractor needs to construct hazardous storage and disposal area, improve the conditions of keeping the HSE training records. PPE equipment usage especially in welding areas poor.	See paragraph 104

28. It has been requested from the contractors to send monthly environmental monitoring activities which could be integrated into the monthly progress report. During the reporting period the environmental monitoring reports (EMR) which have been received from the contractors have been indicated in the Table 3-1.

29. Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor have not submitted any EMR for months between January 2019 and June 2019. ABISRP 02 Contractor has no intention about neither submitting Monthly Progress Reports nor EMR. Despite of repetitive warnings, ABISRP 02 Contractor doesn't pay attention to correct environmental failures.

30. Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) contractor has issued the EMR for January, February, March, April, May and June on time. The quality of improving the reports have been discussed with the Contractor on 27 June 2019. How to improve the quality of EMR of contractors have been discussed with the Environmental Staff of Contractor.

31. Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractor has issued the EMR for January, February, March, April, May and June on time. How to improve the quality of EMR of contractors have been discussed with the Environmental Staff of Contractor.

32. Kuyu Mazar Pump Station (ABISRP 03.1) contractor was replaced Zhang Wenjin with Miao Guowang as the Environmental Manager of Kuyu Mazar Pump Station on 15/11/208. The PIU/SC has been informed about this replacement on 04/February/2019.

33. Kizil Tepa Pump Station (ABISRP 03.2) contractor was replaced Hao Zhe with Miao Guowang as the Environmental Manager of Kizil Tepa Pump Station on 15/11/208. The PIU/SC has been informed 04/February/2019. However, on 03/May/2019 Miao Guowang has been replaced with Zhang Zehui by the Kizil Tepa Pump Station (ABISRP 03.2) contractor. About the last replacement the PIU/SC has not been informed yet.

34. Environmental progress of the Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor considered to be minor. See performance evaluation form at the Annex I. The construction activities in Agitma Regulator, Dvoynik Regulator, Rostguy and Djilvan Regulator has been almost completed. Only some minor activities which doesn't require intensive labour and equipment usage remained. Therefore, the Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor left the site Djilvan and Rostguy areas (See Annex II). The workers camp and equipment and vehicles removed from site. Sites have been cleaned from debris and dredged and/or excavated material.

35. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor has started to the construction at Kharkhur Regulator. Work camp hasn't been formed. Since required staff has been hired from the nearby residential areas. The vehicles and excavators haven't been repaired in construction site. The concrete has been carried form the existing concrete plants. Therefore, no chemical or hazardous material has been observed in site. Excavated material has been stored in nearby areas.

36. Environmental progress of the Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) contractor is moderate. The environmental record keeping system has been formed. Health and safety conditions, social leisure areas have been formed for the workers. Environmental and health and safety labelling partly done which needs observation. Hazardous waste management storage area needs to be improved.

37. Environmental progress of the Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractor is under progress. The environmental record keeping system has been formed. Health and safety conditions, social leisure areas have been formed for the workers. Environmental and health and safety labelling partly done which needs observation. Hazardous waste material observed at site. Hazardous waste

storage area needs to be constructed. See performance evaluation form at the Annex I.

38. Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractor was not able present HSE training records to ADB during mission visit on 17/06/2019. Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) contractor was able present HSE training records to ADB during mission visit on 18/06/2019. The training of the relevant staff of Kizil Tepa Pump Station (ABISRP 03.2) contractor shall be conducted by SC. The HSE staff of Kuyu Mazar Pump Station (ABISRP 03.1) contractor shall incorporate to the same training in order to increase and share his experience.

39. The dredged material excavated at the forebay area of the Kuyu Mazar Pump station has been disposed to a site. A permission from the Novai Ecology and Environmental Protection Headquarter obtained on 22/04/2019 by the Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) contractor for disposal of the dredged material (See Annex III). The spoil deposit area should be levelled according to Chapter 11 on Architecture and Landscaping, Article 11.12 of the General Technical Specification of Contract (GTS). Besides that, the conditions of depositing of dredged material has been explained on this permission as “the spoil area should be levelled and planted”. The contractor should settle the planting of the levelled spoil area with the Novai Ecology and Environmental Protection Headquarter.

40. The dredged material excavated at the forebay area of the Kizil Tepa Pump station has been disposed to a site. A permission from Bukhara Ecology and Environmental Protection Headquarter obtained on 21/02/2019 by the Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractor for disposal of the dredged material. (See Annex III) The spoil deposit area should be levelled according to Chapter 11 on Architecture and Landscaping, Article 11.12 of the General Technical Specification of Contract (GTS). Besides that, the conditions of depositing of dredged material has been explained on this permission as the spoil area should be levelled.

3.3 Issues Tracking (Based on Non-Conformance Notices)

41. During the previous reporting period (July 1st, 2018- December 31st, 2018) the observed Non-Conformance issues which are open have been recorded given below related to the construction activities of Amu Bukhara Main Canal Regulating Structure (ABISRP 02). The following table gives the present situation on these tracked non-conformance notices which are open. Despite of repetitive warnings, ABISRP 02 Contractor doesn’t pay attention to correct actions related to reporting the activity.

Non-Conformances	Corrective measures	Implementation deadline
ABISRP – 02		
Semi-annual EMR R.06, P. 26 – EMR has not been submitted regularly.	The Contractor of ABISRP 02 has been informed to comply with contract requirements.	10 July 2018 (Open)

42. During the same period (July 1st, 2018- December 31st, 2018) Non-Conformance issues of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) have been closed.

43. During the reporting period (January 1st ,2019 – June 30th, 2019) the observed Non-Conformance issues have been recorded given below related to the construction activities of Amu Bukhara Main Canal Regulating Structure (ABISRP 02), Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contracts.

Non-Conformances	Corrective measures	Implementation deadline
ABISRP – 02		
Semi-annual EMR R.08 P. 90 PPE not used by the staff at Kharkhur Construction Site	Daily check, and immediate cautions to the Contractor	01/08/19 (Open)
ABISRP – 03		
Semi-annual EMR R.08 P. 36 at ABISRP 03.01 Kuyu Mazar Construction Site Hazardous material/waste storage area hasn't been constructed according to standards.	The Contractor of ABISRP 03.01 has been informed to develop the existing hazardous waste storage area.	01/07/2019 (Open)
Semi-annual EMR R.08 P. 37 at ABISRP 03.02 Kizil Tepa Construction Site Hazardous waste storage area doesn't exist.	The Contractor of ABISRP 03.02 has been informed to construct hazardous waste storage area.	27/06/2019 (Open)
Semi-annual EMR R.08 P. 38 at ABISRP 03.02 Kizil Tepa Construction Site HSE training records couldn't be presented to ADB mission.	SC will conduct a general training on HSE training types and record keeping and reporting obligations. ABISRP 03.01 Kuyu Mazar HSE staff will accompany to the training.	30/06/2019 (22/06/2019)
Semi-annual EMR R.08 P. 89 at ABISRP 03.01 Kuyu Mazar Construction Site	The Contractor of ABISRP 03.01 shall provide temporary ventilation systems in welding area.	01/07/2019 (Open)
Semi-annual EMR R.08.P. 39 at ABISRP 03.01 Kuyu Mazar Construction Site dredged material storage area left without levelling (GTS Chapter 11 Article 11.12) and planting as defined in the and Environmental Permission	Level the area and plant	19/10/20 (Open)

Non-Conformances	Corrective measures	Implementation deadline
Semi-annual EMR R.08.P. 40 at ABISRP 03.02 Kizil Tepa Construction Site dredged material storage area left without levelling (GTS Chapter 11 Article 11.12) and Environmental Permission	Level the area and plant	19/10/20 (Open)

44. During the reporting period (January 1st ,2019 – June 30th, 2019) the observed Non-Conformance issues have been recorded are 7 in total which only one of them has been closed. Total number of Non-Conformance issues observed is 33 which 79% has been closed. (Table 3-3).

Table 3-3 Summary of Issues Tracking Activity for Current Period

Total Number of Issues for Project	33
Number of Open Issues	7
Number of Closed Issues	26
Percentage Closed	79%
Issues Opened This Reporting Period	7
Issues Closed This Reporting Period	1

45. The distribution of Non-Conformance issues based on priority is shown at the Figure 3-1 and non-conformance level at the Figure 3-2.

Figure 3-1 Summary of Issues by Priority

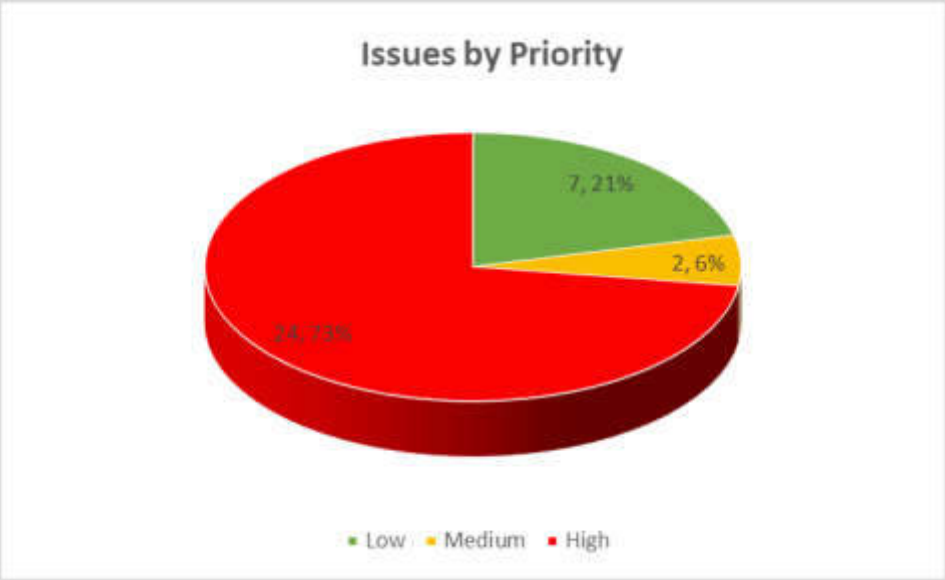
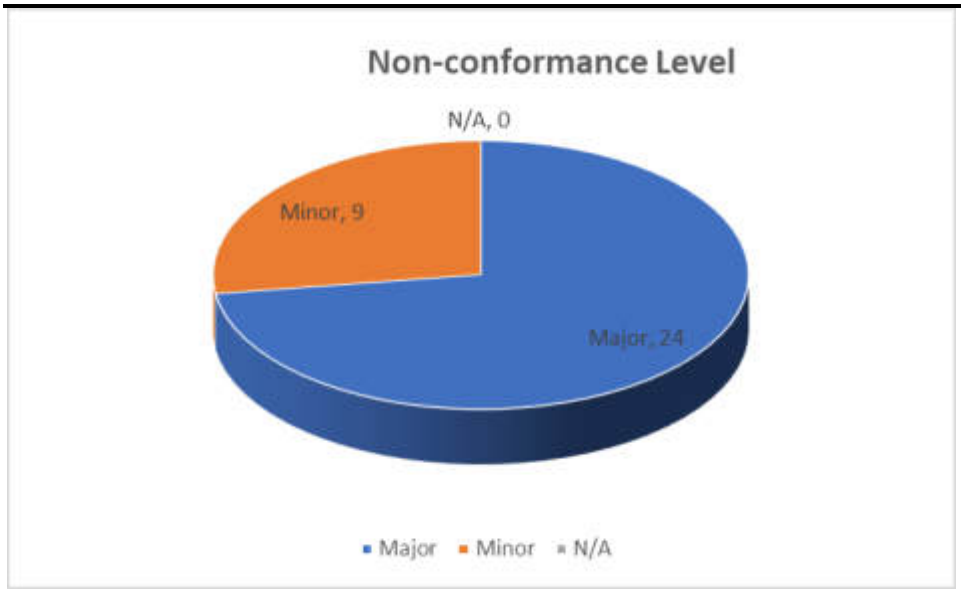
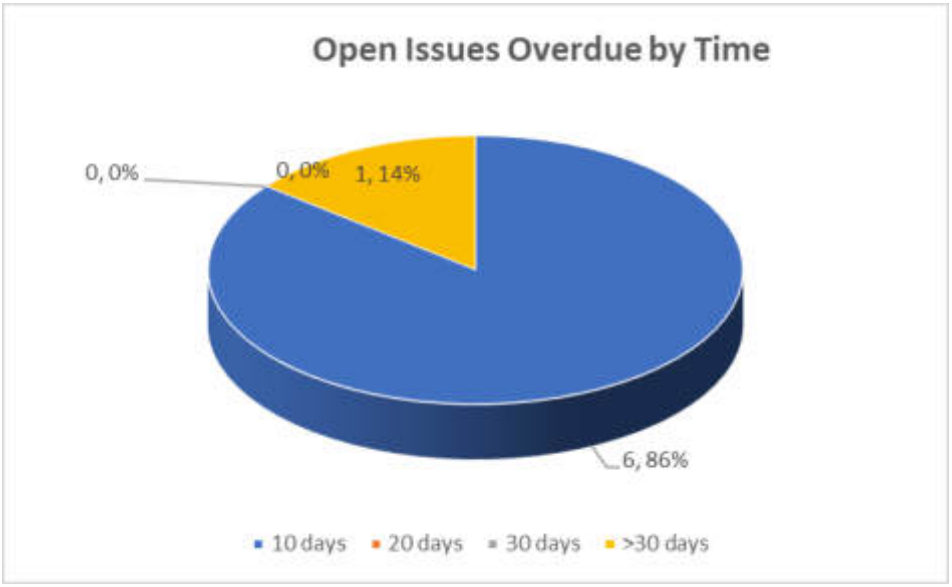


Figure 3-2 Summary of Issues by Non-Conformance



46. Duration to close any issue takes approximately 4 months. The distribution of days required to close any issue has been shown in Figure 3-3.

Figure 3-3 Open Issues Overdue by Time



3.4 Trends

47. Based on the record time, the trends of issues closed has been given at the following.

Semi-annual Report No	Total Number of Issues	% of issues closed on time	% of issues closed late
6	6	60%	40%
7	6	60%	40%
8	7	15%	15%

48. All of the issues which are open belong to Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor. That shows the Contractor's involvement in environmental documentation is in low level.

49. New issues have been opened due to the intensified construction activities continues Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) areas. Both Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractors improving the conditions for the implementation of environmental mitigation measures.

3.5 Unanticipated Environmental Impacts or Risks

50. During the reporting period (January 1st ,2019 – June 30th, 2019) any unanticipated environmental impacts and risks has not been observed.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

51. The Environmental Monitoring study has been based upon the collection of existing background environmental data from the relevant government authorities. The requested information covers quality of irrigation water and soil quality. Until the end of reporting period, the water quality (2015-2016) and water flow amounts (2015-2018) have been received from the relevant government agencies and given as Annex to the Semi-annual EMR R.06. The soil quality data has been re-requested from the relevant government authorities for the next reporting period.
52. According to EMP requirements, Contractors are responsible for conduction visual monitoring of above indicated parameters. There are no more requirements on environmental monitoring included in EMP and as following in SEMP. Submitted EMR of contractor include the environmental activities. The Contractors shall be informed to submit EMR on timely manner.
53. During the reporting period no complaints were received from people living in nearby residential areas for any construction site. In case of receiving such complains, further elaboration in environmental monitoring activities and solving and or settling the problematic issues needed.

4.1.1 Air Emissions and Ambient Air Quality

54. At all the construction sites 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, the mahalla streets and near sub-project construction sites.
55. While excavation and transportation of excavating materials, additional environmental requirements were followed: Schedule transportation activities by avoiding peak traffic periods; Use tarpaulins to cover loose material that is transported to and from the site by truck.
56. Inspection of exhaust emissions of vehicles and machinery used has been controlled in Uzbekistan with a regulation named “Implementation of Mandatory Technical Inspection of Vehicles the Machinery” and numbered 54 which is in force since January 31st, 2003. Each Contractor should hold a valid permission for the vehicles and machineries used in the construction activities. Therefore, the vehicles and machineries used in construction activities do not exceed limits as far as they hold a valid permission from relevant Government authorities.

57. According to the IEE the nature of the project activities, will not generate significant quantities of emissions, therefore visual monitoring of dust has been envisaged at the Environmental Management Plan of the project. Since there isn't any change in the main project activities, no need for monitoring of air quality except the method stated in Environmental Management Plan given at IEE:

4.1.2 Wastewater and Ambient Water Quality

58. The toilet facilities for Contract ABISRP 02 doesn't exist in any site since the activities at sites since the construction activities in Agitma Regulator, Dvoynik Regulator, Rostguy and Djilvan Regulator has been almost completed. Only some minor activities which doesn't require intensive labour and equipment usage remained. In the site of Kharkhur the existing houses has been used as camp area.
59. Closed septic tanks exit both for Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) camp sites. The collected sewage has been transferred by septic tank trucks to disposal site. In the working field workers use toilets located at the existing pump stations.
60. Canal cleaning involved excavation of large amounts of sediment. This was disposed of to the locations agreed with the Engineer. Where there was insufficient space along the side of the canal embankment to deposit the excavated materials, they were transported and deposited in disposal areas further away from the canal. On the site visit 16 07 2018 the dumping area observed at the Agitma Regulator, Dvoynik Regulator, Rostguy and Djilvan Regulator. These sites have been levelled and cleaned according to the observation made on 21.10.2019 (See Annex II).
61. During the canal cleaning works it is unavoidable to form temporary turbidity and sediment problems. Existing water quality of the irrigation water turbid and high in sediment amount, therefore this temporary effect could not be differentiated, unless the sediment amount is measured before and during the cleaning activity.

4.1.3 Noise

62. The contractors have fit the daily regular working hours. It has been reported on EMR of Contractors using new equipment and vehicle which is appropriate for the Occupational Health and Safety Noise levels. Since no grievance has been received from the public it has been considered that noise level doesn't have any effect on public.
63. The Uzbek national construction noise norms that are relevant to all stages of the construction phase are provided by law KMK 2.01.08-96 —Protection from noisell and detailed in Table 4-1.

Table 4-1. Uzbek construction noise norms (KMK 2.01.08 96 —Protection from noise)

Premises and territories	Equivalent sound pressure levels, L_{eq} (dB)									Level of Sound, (dBA)
	31,5	63	125	250	500	1000	2000	4000	8000	
1. Hospital and sanatorium wards, operating hospitals	68	51	39	31	24	20	17	14	13	25
2. Living rooms in apartments, living premises in rest/care homes, sleeping rooms in children boardingschools	72	55	44	35	29	25	22	20	18	30
3. Doctor‘s offices in hospitals, sanatoriums, polyclinics, audience halls of concert-halls, rooms in hotel, living rooms in campus	78	59	48	40	34	30	27	25	23	35
4. Hospital and sanatorium territories adjacent to the buildings	78	59	48	40	34	30	27	25	23	35
5. Territories adjacent to living houses (in 2 m from cladding structures), residential areas of neighbourhoods and housing estates, grounds of schools and preschool institutions, school territories	84	67	57	49	44	40	37	35	33	45
6. Class premises, exercise rooms, auditoriums of schools and other educational facilities, conference halls, audience halls of theatres, clubs, cinemas, halls for court sessions and meetings.	82	63	52	45	39	35	32	30	28	40
7. Administration working premises, working premises of design and engineering organisations, scientific and research institutes	86	71	61	54	49	45	42	40	38	50
8. Café, restaurant, canteen halls, lobby of theatres and cinemas	89	75	66	59	54	50	47	45	43	55
9. Trading halls of shops, sport halls, waiting halls of airports and transport stations, reception centers of housekeeping/ municipal services	93	79	70	63	58	55	52	50	49	60

64. The Sanitarian Rules and Norms on providing allowed noise level into the living building, public building and territory of living areall (SanR&N No.0267-09) establish the maximum admissible noise level into the living areas, both inside and outside buildings, given in the Table 4-2.

Table 4-2. Admissible noise level into the living area, both inside and outside the buldings (SanR&N No.0267-09)

Name of Location		Level of sound pressure, octave bands with average geometric mean frequencies (dB)								Level of Sound, (dBA)
		63	125	250	500	1000	2000	4000	8000	
Living room of flats, bedrooms of resorts (inside)	Daytime 07:00-23:00	63	52	45	39	35	32	30	28	40
	Nighttime 23:00-07:00	55	44	35	29	25	22	20	18	30
Territories adjacent to living houses (outside)	Daytime 07:00-23:00	75	66	59	54	50	47	45	43	55
	Nighttime 23:00-07:00	67	57	49	44	40	37	35	33	45

65. The World Banks “Environmental, Health and Safety General Directives, 2007 (EHS)” is functional instead of PPAH. EHS stipulates that noise at any activity shall not exceed the levels given in the Table 4-3 for given receptors, nor shall they result in a greater increase of ambient noise than 3 dB at the nearest receiving area outside the site.

Table 4-3. Noise Level Guideline (EHS)

Receptor	One Hour L_{Aeq}, (dBA)	
	Daytime 07:00-22:00	Nighttime 22:00-07:00
Residential; institutional; educational	55	45
Industrial; commercial	70	70

66. Nearest Receptor to the Working Areas are listed below:

- The nearest location to the Kuyu Mazar Pump Station (ABISRP 03.1) construction site is settlement area (houses) which has been located approximately 750 m southwest.
- Kizil Tepa Pump Station (ABISRP 03.2) construction site is settlement area (houses) which has been located approximately 500 m west.

67. At the Annex IV of EMR Number-7 an acoustic analysis report has been provided. In the report the Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1)

construction site Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) construction site have been analysed at for the maximum vehicle and equipment conditions. The national and international legislative requirements for the working conditions have been stated at the report. After prediction of sound level at the nearest locations (Paragraph number 66) results which are given at have been summarized at Table 4-4. According to this prediction, no regular noise level measurement is needed since there is no any exceedance possibility.

Table 4-4. Comparison of Equivalent Sound Levels with the National and International Standards.

Site	Equivalent Sound Level in dBA	Standard Type for Specified Receptor in dBA	
		National	International
Kuyu Mazar Pump Station Construction Site	48	55	55
Kizil Tepa Pump Station Construction Site	53	55	55

68. SEMP's of both Kuyu Mazar Pump Station (ABISRP 03.1) construction site Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) construction site states that "monthly noise measurement shall be done if required". According to the results given above it is not necessary to make monthly noise measurements.

69. During the assembling and disassembling of pumps at Kuyu Mazar Pump Station (ABISRP 03.1) construction site Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) construction sites, due to working of existing pumps noise formed. The working staff exposed to this noise produced. Therefore, PPE like earplugs shall be used and this will be checked by HSE staff of the Contractors and SC:

4.2 Trends

70. Based on the visual inspection and EMR reports the air, noise and water quality conditions has not considerably changed during the project construction span. The existing performance of the Contractors has been evaluated based on the Environmental Management Plan (EMP) of the overall project and attached to Annex I.

4.3 Summary of Monitoring Outcomes

71. The established monitoring system is advice to be kept as they are it is early to make any comments on ceasing/altering monitoring since the construction activities already has been started.

4.4 Material Resources Utilization

4.4.1 Current Period

72. The utilization of electricity, water and any other materials have not been included within the SEMP of any contractor. Therefore, the EMR doesn't include this kind of information.

4.4.2 Cumulative Resource Utilization

73. As indicated in paragraph 72 material records have not been kept. Therefore, cumulative progress not included into the EMR.

4.5 Waste Management

74. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor hasn't signed any contract related to the waste disposal. The waste originated form their construction and workers daily activities has been verbally reported that disposed to the municipal solid waste disposal areas by their own trucks/tractors.
75. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) has submitted a Waste Management Plan on 11th May 2018 and Hazardous Materials Management Plan on 10th May 2018 (Semi-annual EMR R.06).
76. The solid waste disposal area of Contractor of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) has been declared as Kuyu Mazar Solid Waste Disposal area which is approximately 3 km away from the Kuyu Mazar Pumping Station.
77. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) has signed a protocol with Toza-Khudud firm for collection, transfer, and disposal of the domestic solid waste. The protocol was valid until the 31st December 2018. During this reporting period the Contractor has signed again a protocol with the same company for extension of the services for collection, transfer, and disposal of the domestic solid waste.
78. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) has submitted a Waste Management Plan on 11th May 2018 and Hazardous Materials Management Plan on 10th May 2018 (Semi-annual EMR R.06).
79. The solid waste disposal area of Contractor of Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) has been declared a local Solid Waste Disposal area which is approximately 6 km away from the Kizil Tepa Pumping Station.
80. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) has signed a protocol with Toza-Khudud firm for collection, transfer, and disposal of the domestic solid waste. The protocol was valid until the 31st December 2018. . During this reporting period the Contractor has signed again a protocol with the same

company for extension of the services for collection, transfer, and disposal of the domestic solid waste.

4.5.1 Current Period

81. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor has no record about the type, quantity of waste produced and disposed. Any domestic solid waste has not been observed at the construction and or camping sites.

82. During the reporting period (1st January – 30June 2019) the Contractor of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) has dumped five times once domestic solid waste to the site defined at Paragraph 76. The transfer and disposal of solid waste has been realized by Toza-Khudud firm.

Date of Solid Waste Transfer	Amount of Solid Waste (m^3)					Storage Area
	Type I Very Hazardous	Type II Hazardous	Type III Medium Hazard	Type IV Slightly Hazardous	Type V Nearly No Hazard	
15,January,2019					2,64	Toza-Khudud
15,February,2019					2,64	Toza-Khudud
6,March,2019					2,64	Toza-Khudud
29,April,2019					1,98	Toza-Khudud
29,May,2019					1,98	Toza-Khudud
EMR-8 TOTAL	**0**	**0**	**0**	**0**	**11,88**	

83. During the reporting period (1st July 2018 – 31st December 2018) the Contractor of Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) has dumped four times domestic solid waste to the site defined at Paragraph 79. Totally five times disposals have been made. The recorded disposals are given in the following. The transfer and disposal of domestic solid waste has been realized by Toza-Khudud firm.

Date of Solid Waste Transfer	Amount of Solid Waste (m^3)	Storage Area

	Type I Very Hazardous	Type II Hazardous	Type III Medium Hazard	Type IV Slightly Hazardous	Type V Nearly No Hazard	
7, January,2019					3	Toza-Khudud
14, February,2019					3	Toza-Khudud
22, March, 2019					3	Toza-Khudud
22, April, 2019					3	Toza-Khudud
21,May,2019					3	Toza-Khudud
EMR-8 TOTAL	**0**	**0**	**0**	**0**	**15**	

84. The dredged material excavated at the forebay area of the Kuyu Mazar Pump station disposed to the site which has been permitted by the local authorities on 22/April/2019.

85. The dredged material excavated at the forebay area of the Kizil Tepa Pump station shall be disposed to the which has been permitted by the local authorities on 21/February/2019.

4.5.2 Cumulative Waste Generation

86. During reporting period (1st January 2019 – 30th June 2019) totally 130.4 m³ of solid waste has been originated within the scope of Amu Bukhara Irrigation System Rehabilitation Project. Approximately 32% of this waste amount has been restored for reuse and recycle purposes at the premises of ABMK Kizil Tepa storage areas. The progress in solid waste disposal has been shown below table.

EMR Report Number	Kuyu Mazar		Kizil Tepa		Total	
	Disposed	Recyled or Reused	Disposed	Recyled or Reused	Disposed	Recyled or Reused
6	3	0	3,9	0	6,9	0
7	42,62	0	12	42,00	54,62	42
8	11,88	0	15	0,00	26,88	0
Total	57,5	0	30,9	42	88,4	42

4.6 Health and Safety

4.6.1 Community Health and Safety

87. During reporting period (1st January – 30 June 2019) no incidents occurred resulted in Community Health and Safety issues, including the traffic accidents.

4.6.2 Worker Health and Safety

88. During reporting period (1st January 2019 – 30th June 2019) no incidents occurred resulted in the working and camp site area.

89. During ADB mission at site Kuyu Mazar Pump Station (ABISRP 03.1) on 18th June, 2019 it has been noted that smoke has been formed due to poor ventilation in welding area. Temporary ventilation shall be provided in welding area.
90. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor has started to the construction at Kharkhur Regulator. Working staff has no intention to use PPE. In order to make the staff to use PPE, daily check, and immediate cautions to the Contractor shall be made by the SC team.
91. During the site visit it has been observed that the health and safety instruction posters have been attached to a board in the working site.
92. Mr. Miao Guowang has been assigned as the Health and Safety Specialist of Kuyu Mazar Pump Station (ABISRP 03.1) contract.
93. Mr. Miao Guowang and afterwards Mr. Zhang Zehui has been assigned as the Health and Safety Specialist of Kizil Tepa Pump Station (ABISRP 03.2) contract.

4.7 Training

94. The training was conducted by Saban Cimen SC Environmental Specialist for Kuyu Mazar Pump Station (ABISRP 03.1) contract and of Kizil Tepa Pump Station (ABISRP 03.2) contract HSE staff related to “General Introduction To Health And Safety Training” on 22 June 2019. (See Annex IV)
95. Mr. Miao Guowang as the Health and Safety Specialist of Kuyu Mazar Pump Station (ABISRP 03.1) contract has conducted numerous HSE trainings for the Chinese staff working at the Kuyu Mazar construction site during the reporting period (1st January 2019 – 30th June 2019).
96. Mr. Miao Guowang as the Health and Safety Specialist of Kizil Tepa Pump Station (ABISRP 03.2) contract has conducted numerous HSE trainings for the Chinese staff working at the Kizil Tepa construction site during the reporting period (1st January 2019 – 30th June 2019).
97. Mr. Bakhodir Tillaboev as local HSE administrator of Kuyu Mazar Pump Station (ABISRP 03.1) contract and Kizil Tepa Pump Station (ABISRP 03.2) contract has conducted numerous HSE trainings for the local staff working at both sites during the reporting period (1st January 2019 – 30th June 2019).

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

98. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor has submitted the SEMP just to fulfil its administrative obligations. The preliminary SEMP of the Contractor received in December 2016 was assessed to be as ''conditionally no objection'' on 20.12.2016 and later the document revised accordingly was re-submitted on 24.01.2017.

99. Currently SEMP of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) (14th February 2018 is submission date of third revision and 20th February 2018 no objection date) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) (14th February 2018 is submission date of third revision and 20th February 2018 no objection date) considered to fit the environmental requirements of the construction activities. Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractors submit EMR's regularly on time.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

100. There isn't any activity that can be recorded as good practice during the reporting period (1st January 2019 – 30th June 2019).

6.2 Opportunities for Improvement

101. In the working sites of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) and Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) operation of pumps has not been sustained and technical and administrative staff of existing pump stations are in the working site. Contractor's Health and Safety Specialist should follow their own staff about the implementation of health and security issues.

7 SUMMARY AND RECOMMENDATIONS

7.1 Summary

102. During the previous reporting (EMR-7) period (July 1st, 2018 and 31st, December 2018) the following environmental safeguard activities have been performed. These activities have been listed to emphasize the frequency of safeguard activities:

- The training by Keti Dgebuadze RETA/ADB International Environmental Safeguards Consultant for PIU, SC and CC staff related to new Manual for Monitoring of Environmental Safeguards Implementation conducted on 2 July 2018.
- Training of the field Supervision Engineers of the Consultant by SC about the implementation of environmental monitoring and how to develop it on 18th December 2018 in Bukhara.
- Environmental Audit by SC on Site environmental and health and safety conditions of the Contractor ABISRP 03.01 and 02 sites on 12 July 2018.
- Environmental Audit by SC on Site environmental and health and safety conditions of the Contractor ABISRP 02 sites on 16 July 2018.
- Environmental Audit by SC on Site environmental and health and safety conditions of the Contractor ABISRP 02, ABISRP 03.01 and 02 sites on 12 July 2018.

103. During the reporting period (1st January 2019- 30th June 2019) the following environmental safeguard activities have been performed:

- Environmental Review by ADB Mission composed of Ms. Ana Paula Araujo, Environment Specialist, CWOD-PSG/Mission Leader; Ms. Feruza Insavalieva, Associate Safeguards Officer, Uzbekistan Resident Mission (URM); Ms. Stephanie Sioson, Senior Operations Assistant, CWOD-PSG; Ms. Keti Dgebuadze, RETA 9541 International Environmental ConsultantThe training by Keti Dgebuadze RETA/ADB International-Regional Environmental Safeguards Consultant conducted between dates 17-18 of June 2019. PIU and SC staff accompanied to these review study.
- Training of HSE Staff of Kuyu Mazar Pump Station (ABISRP 03.1), Kizil Tepa Pump Station (ABISRP 03.2) Contactors about implementation of Health and Safety Training by Saban Cimen SC on 22/June/2019.
- Environmental Audit by Saban Cimen SC on Site environmental and health and safety conditions of the Contractor ABISRP 03.01 and 02 sites between dates 17thand 27th of June 2019.
- Environmental Audit by Saban Cimen SC on Site environmental and health and safety conditions of the Contractor ABISRP 02 sites on 21 June 2019.

7.2 Recommendations

104. Conduct environmental audit by SC on Site environmental and health and safety conditions of the Contractor ABISRP 02, ABISRP 03.01 and 02 sites on till the end of next reporting period.

105. PPE usage at the Kharkhur Regulator construction site of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor is an issue to be monitored regularly by SC and reported in next EMR report. The deadline envisaged for this has been considered as 30th July 2019.

106. The improvement of hazardous waste management storage area shall be made by Kuyu Mazar Pump Station (ABISRP 03.1) contractor until 01/07/2019. The expected improvement is rehabilitating the existing hazardous waste management storage area according to the required specifications defined at Hazardous Materials Management Plan.

107. The Contractor of Modernization and Rehabilitation of Kuyu Mazar (ABISRP 03.1) shall leave the disposal site of the dredged material as “levelled and planted” which is defined in the permission obtained from the Novai Ecology and Environmental Protection Headquarter on 21st February 2019. The levelling of the disposal site is part of the contract which is defined at Article 11.12 of Chapter 11 on Architecture and Landscaping. Planting of this site is an issue to be resettled with the Novai Ecology and Environmental Protection Headquarter. Since the priority of this issue compared to the completion of work is less therefore the deadline of the implementation is agreed as 19th September 2020.

108. The Contractor of Modernization and Rehabilitation of Kizil Tepa (ABISRP 03.2) shall leave the disposal site of the dredged material as “levelled” which is defined in the permission obtained from the Bukhara Ecology and Environmental Protection Headquarter on 22nd April 2019. The levelling of the disposal site is part of the contract which is defined at Article 11.12 of Chapter 11 on Architecture and Landscaping. Since the priority of this issue compared to the completion of work is less therefore the deadline of the implementation is agreed as 19th September 2020.

109. Occupational health and safety problem related to use PPE have been faced during ADB mission at site Kuyu Mazar Pump Station (ABISRP 03.1) on 18th June, 2019. The contractor has been informed on the issue mean time. The solution provided to this issue need to be monitored till 30th July 2019 by SC.

110. ADB Project Team to discuss hiring of SC National Specialist and PIU Environmental Specialist – till 30th July 2019.

111. CC to ensure there is adequate ventilation when welders work in confined spaces and they are equipped with special masks by July 2019.

112. Recommendations made by ADB Mission will be the complementary part of this document.

ANNEX I PERFORMANCE EVAULATION OF ENVIRONMENTAL MONITORING OF ABISRP

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
PRE-CONSTRUCTION PHASE						Lot 1	Lot 2	
Has the Consultant reviewed IEE?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	EEC	Y	N/A	N/A	N/A	N/A
If the IEE has been updated has it been sent to the ADB for approval?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	EEC	Y	N/A	N/A	N/A	N/A
Has the PIU submitted IEE assessment report for approval to the National Authorities?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	PIU	Y	N/A	N/A	N/A	N/A
Has the Consultant included the EMP as a special Condition in the Bid Document?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	PEC	Y	N/A	N/A	N/A	N/A
Has the Contractor designed adequate staff facilities in the pump house redesigns (water-seal toilets, furbished rest rooms, dining rooms, etc.)	By technical review	Once in the review of design documents	CEC	N/A	N/A	Y	Y	N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor's design include raised walking ways?	By technical review	Once in the review of design documents	CEC	N/A	N/A	Y	Y	N/A
Does the Contractor's design provide safety guards on the areas exposed to the machinery?	By technical review	Once in the review of design documents	MEC	N/A	N/A	Y	Y	N/A
Does the Contractor's design have any drainage facility to lower ground water?	By technical review	Once in the review of design documents	CEC	N/A	Y	Y	Y	Y
Does the design meet the internationally acceptable safety standards of electricity for wet working areas?	By technical review	Once in the review of design documents	ElEC	N/A	Y	Y	Y	Y
Does the design consider critical periods for biological life and adhere any avoidance plan?	By technical review	Once in the review of design documents	EEC	N/A	N/A	N/A	N/A	N/A
Does the Contractor have proper survey equipment?	By technical review	Once in the review of design documents	CEC	N/A	Y	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the design ensure free access to the facilities and availability of roads to them for O&M?	By technical review	Once in the review of design documents	CEC	N/A	Y	Y	Y	Y
Does the design take care the placement of building and facilities considering fire breaks?	By technical review	Once in the review of design documents	MEC	N/A	N/A	Y	Y	N/A
Does the design consider Corrosion protection of buildings by ground water?	By technical review	Once in the review of design documents	CEC	N/A	Y	Y	Y	Y
Does the design care the fire proof materials where necessary?	By technical review	Once in the review of design documents	CEC	N/A	N/A	Y	Y	N/A
Has the Contractor checked the desilting efficiency of inlet canal design and desilting basins?	By technical review	Once in the review of design documents	CEC	N/A	Y	Y	Y	Y
Has the Contractor developed inlet having sand trap and/or other alternative devices?	By technical review	Once in the review of design documents	CEC/MEC	N/A	Y	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the design consider oil separators to have oil concentration less than 0.3 mg/l?	By technical review	Once in the review of design documents	CEC/MEC	N/A	N/A	Y	Y	N/A
Does the Contractor develop a Worker Safety Plan in compliance with Uzbekistan Labour Code?	By technical review	Once in the review of design documents	EEC	N/A	Y	Y	Y	Y
Does the design consider protection measures for pipes laid in saline areas?	By technical review	Once in the review of design documents	MEC	N/A	N/A	N/A	N/A	N/A
Does the design consider safety conditions of crossing, bridges that will be used for transportation of vehicles, equipment, and staff?	By technical review	Once in the review of design documents	CEC	N/A	Y	N	Y	Y
Does the design consider landscaping convenient to the prevailing natural conditions?	By technical review	Once in the review of design documents	EEC	N/A	Y	N/A	N/A	Y
Does the design consider training of O&M staff on mechanical and electrical equipment?	By technical review	Once in the review of design documents	ElEC	N/A	N/A	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the design consider supplying transformers free of PCB?	By technical review	Once in the review of design documents	ElEC	N/A	N/A	Y	Y	N/A
Is the EMP attached to the Contract to form a part of Contract Documents?	By technical review	Once in the review of design documents	PEC	Y	Y	Y	Y	Y
Does the design consider the irrigational and drinking water requirements?	By technical review	Once in the review of design documents	MEC	N/A	Y	Y	Y	Y
Has PIU evaluated the bidder by checking EMP requirements?	By technical review	Once in the review of design documents	PEC	N/A	Y	Y	Y	Y
Has the Contractor prepared an acceptable EMP based on the Approved IEE?	By technical review	Once in the review of design documents	CEC	Y	Y	Y	Y	Y
Has the Contractor developed Contingency Plan for accidents including spill of fuel?	By technical review	Once in the review of design documents	EEC	N/A	Y	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor submitted the Site Environmental Management Plan?	By technical review	Once in the review of design documents	EEC	N/A	Y	Y	Y	Y
Does the Contractor publish a public notice regarding the nature and location of the project?	Questionnaires	Once in the initial phase of construction project.	C	N/A	N	N/A	N/A	N
Has the Consultant conducted training program for WCA?	By the activities of PIU Technical Assistance Team	Once according to the time schedule of the training program	EEC	Y	N/A	N/A	N/A	N/A
Has the Consultant conducted training program for BISA?	By the activities of PIU Technical Assistance Team	Once according to the time schedule of the training program	EEC/MEC	N	N/A	N/A	N/A	N/A
Has the EMP been explained to the Contractor before the commencement of works?	By the activities of PIU Technical Assistance Team	Once before the commencement of construction project.	PMC/EEC/PIU	N/A	Y	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor defined Environmental Management Officer?	Biding Documents	Once in bid evaluation phase	C	N/A	Y	Y	Y	Y
Has the Contractor defined Safety Officer?	Biding Documents	Once in bid evaluation phase	C	N/A	N	Y	Y	N
Does the Contractor handle the protected plant species, trees taking care of environmental concerns and/or permissions?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor excavate and preserve the top soil?	Questionnaires	monthly	C	N/A	N	N/A	N/A	N
Does the Contractor maximize the use of excavated material for construction works?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor defined the licensed or got permissions borrow area for usage of construction material?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor caused any landslide or erosion?	Questionnaires	monthly	C	N/A	N	N	N	N
Has the Contractor stockpiles of excavated material for backfilling?	Questionnaires	monthly	C	N/A	Y	N	N	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor realized the work activities during non-cropping periods?	Questionnaires	monthly	C	N/A	Y	N/A	N/A	Y
Has the Contractor take measures for providing water continuously during construction work?	Questionnaires	monthly	C	N/A	Y	N/A	N/A	Y
Has the Contractor defined spoil disposal site with the local authorities?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor disposed/recycled the waste material from the construction area?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has PCB containing electrical equipment disposed according to the requirements of Gozecoexpertisa?	Questionnaires	monthly	C	N/A	N/A	N/A	N/A	N/A
Has the Contractor defined material storage area?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Has the Contractor defined fuel storage area 20 m away from water course?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Is the noise level in working area below the defined limit 80 dB(A)?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor taken noise prevention measures for staff using noisy equipment, vehicles?	Questionnaires	monthly	C	N/A	N	N	N	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Is the nearest residential area affected by the noise level?	Questionnaires	monthly	C	N/A	N	N	N	N
Has the working activities limited by daylight hours?	Questionnaires	monthly	C	N/A	Y	N	N	Y
Does the Contractor have a water tanker for spraying water to roads?	Questionnaires	monthly	C	N/A	N	N	N	Y
Does the Contractor suppress the dust by watering?	Questionnaires	monthly	C	N/A	Y	N	N	Y
Has the Contractor trained the staff on personnel health and sanitation procedures at the working camp, how to interact with the host communities, subprojects environmental protection measures?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor trained the staff on contingency plan?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor trained the personnel for fuel handling procedure?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor train any person for the first aid?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor apply any simple training measure for the visitors?	Questionnaires	monthly	C	N/A	N	N	N	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor keep the records for all kind of training?	Questionnaires	monthly	C	N/A	Y	Y	N	Y
Number of accidents occurred during report period?	Questionnaires	monthly	C	N/A	0	0	0	0
Does the Contractor supply clean drinking water to the staff?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor provide the staff hygienic living and working conditions?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor have toilets, baths, sleeping quarter, dining hall for the staff?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor have any social facilities like sporting area, canteen, shuttle vehicles to the local centres, etc.?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor check the health of the staff regularly?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor keep the health record of the staff?	Questionnaires	monthly	C	N/A	N	N	N	N
Does the Contractor have adequate fire protection measures?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Has the Contractor made available the first aid kit to the staff?	Questionnaires	monthly	C	N/A	N	Y	Y	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor provided safe floor and handrails, stairs, lifts where necessary?	Questionnaires	monthly	C	N/A	Y	N	Y	Y
Has the Contractor provided the enough ventilation and lightening in the specific areas?	Questionnaires	monthly	C	N/A	N	N	Y	Y
Has the Contractor provided the safety equipment, material to the staff?	Questionnaires	monthly	C	N/A	N	Y	Y	Y
Does security staff exist in the working area?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the working area have fencing in order to protect intrusion?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Has the Contractor defined solid waste storage area?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor defined the area for used material storage?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor apply solid waste separation for recyclable solid waste?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor keep any record for the waste recycled?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Contractor keep any record for the solid waste disposed?	Questionnaires	monthly	C	N/A	N	Y	Y	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor keep any record for the hazardous waste disposed?	Questionnaires	monthly	C	N/A	N	N	Y	N
Does the Contractor use the local public roads even the avoidance from these road(s) possible?	Questionnaires	monthly	C	N/A	Y	Y	N/A	Y
Has the Contractor collected and disposed the solid waste regularly?	Questionnaires	monthly	C	N/A	Y	N	Y	Y
Does the Contractor discharge the sewerage after treatment?	Questionnaires	monthly	C	N/A	N	N/A	N/A	N
Does the Contractor avoid the peak hours of local traffic in case of use of local public roads?	Questionnaires	monthly	C	N/A	Y	N/A	N/A	Y
Does the material carried on public roads covered?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor use the vehicles having the controlled exhaust emissions?	Questionnaires	monthly	C	N/A	N	Y	Y	N
Does the Roads selected by the Contractor effect the protected areas?	Questionnaires	monthly	C	N/A	N	N	N	N
Does the public informed with adequate signs about the working area and vehicles?	Questionnaires	monthly	C	N/A	N	N	N	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Do the Vehicles of the Contractor fit in to the speed limits?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Does the Contractor repair all infrastructure/roads when damage given by them?	Questionnaires	monthly	C	N/A	Y	Y	Y	Y
Has the Contractor removed the soil if they contaminated?	Questionnaires	monthly	C	N/A	Y	N/A	N/A	Y
Has the Contractor left the working area as defined in Landscape section of the Bidding Documents?	Questionnaires	monthly	C	N/A	Y			Y
Has the Operating Personnel signed and accepted all work sites, labour camps, storage areas and temporary dumping areas?	Questionnaires	monthly	C	N/A	N	N	N	N
Number of grievances about the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	0	0	0	0
Number of grievances solved by the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	0	0	0	0

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor provided the training on the safe use of electricity and pumps for operational staff?	Questionnaires	Once when the project activities completed	EEC	N/A	N/A	Y	Y	N/A
Has the Contractor evaluated the trained O&M staff?	Questionnaires	Once when the project activities completed	MEC/ElEC	N/A	N/A			N/A
Has the Consultant trained the WCA, BISA staff for irrigation canal and drainage canal management?	Questionnaires	Once when the project activities completed	EEC	Y	N/A			N/A
Has the Consultant evaluated the trained WCA, BISA staff?	Questionnaires	Once when the project activities completed	EEC	Y	N/A	N/A	N/A	N/A
Has the Oil Separator regularly checked and properly maintained?	Questionnaires	Once when the project activities completed	EEC	N/A	N/A	N/A	N/A	N/A
Has the relevant organizations observed the irrigation water quality?	Questionnaires	Once when the project activities completed	EEC	N	N/A	N/A	N/A	N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the relevant organizations observed the ground water level in the irrigation area?	Questionnaires	Once when the project activities completed	EEC	N	N/A	N/A	N/A	N/A
Have the farmers applied crop rotation?	Questionnaires	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Have the farmers applied environmentally friendly agricultural production techniques?	Questionnaires	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Has the fertility and productivity been enhanced?	Questionnaires	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Has the O&M staff applies the national Worker Safety Plan?	Questionnaires	Once when the project activities completed	C	N/A	N	Y	Y	N
Has the Contractor made facilities available in the operational building with the clean drinking water?	Questionnaires	Once when the project activities completed	C	N/A	Y	Y	Y	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor made facilities available in the operational building with sewerage disposal/handling?	Questionnaires	Once when the project activities completed	C	N/A	N	Y	Y	N
Has the international agreements about the water abstraction been fitted?	Questionnaires	Once when the project activities completed	EEC		N/A	N/A	N/A	N/A
GENERAL ENVIRONMENTAL IMPACTS OF THE PROJECT ON THE ENVIRONMENT								
Flow amount of water in channels?	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Irrigated Area (ha)	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Amount of water used for irrigation purposes.	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Water quality of irrigation water (pH, salinity, hardness, BOD, COD, Nitrate, Nitrite, Ammonium, Phosphate, Pesticides, Oil products, phenol) in the project area.	Measurement	Bi-annual	PIU, HGMEs, Uzhydromet	N	N/A	N/A	N/A	N/A
Soil quality/pollution (SOM) (humus), soil carbon, mobile and gross NPK, nitrates, nitrites, ammonium, phosphate, pesticides)	Measurement	Bi-annual	PIU, BISA, HGMEs, and WCAs	N	N/A	N/A	N/A	N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement from Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Applicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Water levels of wells in the irrigated areas? (specify wells)	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Amount of water used for irrigation purposes.	Health Statistics of Local Authorities	Yearly	PIU from local MoH	N	N/A	N/A	N/A	N/A
Electricity Consumed before the project by pumping?	Electricity Meter Records	Monthly Consumed, yearly total	BISA	N	N/A	N/A	N/A	N/A
Electricity Consumed after the project by pumping?	Electricity Meter Records	Monthly Consumed, yearly total	BISA	N	N/A	N/A	N/A	N/A
Water quantity pumped before rehabilitation/reconstruction?	Flow Measurement	Monthly, average flow	BISA	N	N/A	N/A	N/A	N/A
Water quantity pumped after rehabilitation/reconstruction?	Flow Measurement	Monthly, average flow	BISA	N	N/A	N/A	N/A	N/A
Reduction in % of GHG by implementation of project?	Calculations	Once based on yearly energy consumption amounts	Calculated by PIU CCMS		N/A	N/A	N/A	N/A

BISA : Basin Irrigation System Authority of Regions
C: Contractor of any Subcomponent
CEC: Civil Engineer of Consultant
CCMS: Climate Change Mitigation Specialist

EEC: Environmental Expert of Consultant
ElEC: Electrical Engineer of Consultant
EMR: Environmental Monitoring Report
MEC: Mechanical Engineer of Consultant
MoH : Ministry of Health
MRoC: Monthly Report of the Contractor about the Implementation of EMP
PEC: Procurement Expert of Consultant
PMC: Project Manager of Consultant
PIU: Project Implementation Unit
WCA: Water Consumer Associations

ANNEX II- PHOTOS

Modernization & Rehabilitation of Amu Bukhara Main Canal Regulation Structures (ABISRP 02)

Construction Works at Agitma

September 2018

21 June 2019

Construction Works at Djilvan Regulator

August 2018

21 June 2019

Rostguy Regulator

17 December 2018

21 June 2019

Dvoynik Regulator (Alat)

ABMK 1 Regulating Structure

21 June 2019

ABMK 2 Regulating Structure

21 June 2019

Kharkhur Regulator

21 June 2019

21 June 2019

Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1)

Kuyu Mazar Working Site

17 June 2019

17 June 2019

Kuyu Mazar Working Site
Pump Station

17 June 2019

Camp Site

18 June 2019

Kuyu Mazar Working Site
Pump Station

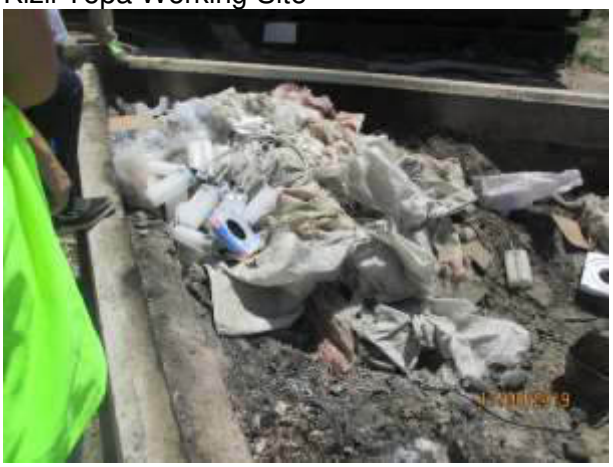
27 June 2019

Hazardous Material Storage Area (spil control work)

27 June 2019

Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2)

Kizil Tepa Working Site



17 June 2019

17 June 2019

Kizil Tepa Pump Station

Pump Station

17 June 2019

Camp Site

17 June 2019

Kizil Tepa Pump Station
Pump Station

27 June 2019

Hazardous Solid Separation (Under Progress)

27 June 2019

ANNEX III ENVIRONMENTAL PERMISSIONS

THE CONCLUSION OF THE STATE ENVIRONMENTAL ASSESSMENT

Facility: Correction of the project of environmental impact statement "Modernization and reconstruction of Kuyu-Mazar pump station located on the territory of Kogon district", Bukhara

CLIENT: "HEBEI CONSTRUCTION GROUP CO.LTD"

DESIGNER: LLC "ECOXIM NAVOIY"

To the head of the permanent establishment of "HEBEI CONSTRUCTION GROUP CO.LTD"
Mr ZHENG SUCHEN

To the Department for the Protection of Water and Land Resources and the Department for Ecology and Environmental Protection of Kogon district, Bukhara region

The design of the first stage of the environmental impact assessment (design EIS) was presented to the Department for the Protection of Water of state ecological review of Bukhara region "Modernization and reconstruction of Kuyu-Mazar pump station located on the territory of Kogon district".

A positive "Conclusion" of the Center State Expertise review of Bukhara region for No. E-7-843 dated April 30, 2018, was received for the previously developed project "EIS" for the rehabilitation (modernization) and reconstruction of the pump station Kuyu-Mazar. Kuyu-Mazar pump station serves to supply water to the irrigated areas of Navoi and Bukhara regions, as well as to the Kuyu-Mazar reservoir from the Amu-Bukhara canal using pressure pipelines, lifting height of which is 17÷22 m.

According to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 949 dated November 22, 2018, Kuyu-Mazar pump station belongs to the 3rd category of environmental impact (clause 6- groundwater intakes of regional significance).

The pump station borders: from the north-grasslands of the district; from the west-grasslands and highway Kogon-Kiziltepa at the distance of 285m; from the south-

grasslands of the district, approach channel of ABMC; from the east- grasslands of the district and 1600 m Kuyu-Mazar reservoir.

Approach canal; trash rack structure; pump station building; the area of the pipeline; anchoring support No.1; pressure pipeline with the diameter of 3200 mm (Kharkhur branch); pressure basin (Kharkhur branch); pressure pipeline with the diameter of 3600 mm (Shofrikon branch); pressure basin (Shofrikon branch); ABC buildings of Shofrikon and Kharkhur branches; electric power station 6 X 35 kW; bulkhead; desilt basin of technical water No. 1; desilt basin of technical water No. 2; DPS and storage room; workshop area; security post; watchman office (2 pcs); kitchen (with electric ovens for cooking meals); restroom; outside toilet (2 pcs); the building of drainage pumps; the auxiliary room is located in the territory of Kuyu-Mazar pump station of ABMC.

Modernization will be carried out according to the placements of the units and trash rack structures. At the present time, the pipelines and the channels are not reconstructed. Their modernization will be carried out according to a separate project. The project provides the modernization of obsolete equipment with its subsequent replacement with new ones and the introduction of modern energy-saving technologies that meet international standards.

The Amu-Bukhara canal is a major watercourse in the area under consideration, flowing next to the Kuyu-Mazar pump station and Kuyu-Mazar reservoir, serving mainly for irrigation and drinking purposes. Kuyu-Mazar reservoir with a total volume of 320 million m^3, including the useful volume of 275 million m^3; and Tudakul reservoir with a total volume of 1,200 mln.m^3, including a useful volume of 700 mln m^3. Both of these reservoirs receive water from the ABMC system and are used to store and compensate for irrigation drains. In addition, Kuyu-Mazar reservoir is also the main source of fresh drinking water for the city of Bukhara.

The design and actual capacity of Kuyu-Mazar pump station of ABMC canal with a length of 17 km and a diameter of 2840 mm are: design flow rate is 100 m^3 / sec, the actual flow rate is 90 m^3/ sec. The project ensures the modernization of obsolete equipment with its subsequent replacement with new ones and the introduction of modern energy-saving technologies that meet international standards. Existing Kiziltepa pump station will be reconstructed and modernized. Design and actual

throughput of Kiziltepa pump station of ABMC on Shofrikon branch with the length of 25,7 km, with the diameter of -3600mm, design discharge of water is 90m³/sec, actual discharge of water is 80m³/sec, Kharkhur branch with the length of 14.0 km, with the diameter of -3200mm, design discharge of water is 60m³/sec, actual discharge of water is 55m³/sec.

Replacement of obsolete equipment, rehabilitation and modernization of 3 priority pump stations in AMBC system (Amu-Bukhoro-1, Kuyu-Mazar and Kiziltepa) will ensure water supply for irrigation, technical water for industry and drinking needs of the rural population.

The rehabilitation of the facilities include all structural, mechanical and electrical components of the pump station: approach and discharge channels(pipelines), trash racks, absorbing pipes, pumps, valves, pressure pipelines, electric supply system, power equipment, equipment for surge protection, control system, pump station buildings and auxiliary equipment. The modernization of the workshops for technical maintenance of existing and improved pump units are also foreseen. The replacement of the pumps to Austrian ones with electric motor XIANGTAN 6kW is intended. Also, DPS will be changed to 2 pcs with 500kW 400 V. After the modernization of the pump station the water supply will increase to 25,2 m³/sec or to 25% from the existing capacity of the pump.

Forty (40) people will be involved to carry out the work at the facility.

The total construction period of the modernization and reconstruction of Kuyu-Mazar pump station is 5 years.

As a result of modernization and reconstruction of existing units, 11 types of harmful substances are emitted from 3 unorganized sources: gland oxide, manganese oxide, abrasive dust, metallic dust, nitrogen dioxide, benzopyrene, hydrocarbons, carbon oxide, sulfur oxide, soot, formaldehyde. Total tonnage of emissions of harmful substances on the facility is 0,04494 tons/year 0,805351 h/sec, from them: permanent 0,032582 tons/year and 0,284316 h/sec, emergency salvo emissions is0,012358 tons/year and 0,521035 h/sec.

In order to assess the pollution of the atmospheric air with harmful substances, the calculation of the dispersion of emissions of harmful substances was carried out for

each substance of the site. According to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 14 dated January 21, 2014 "On the procedure for developing and approving projects of environmental standards" (Chapter 3, paragraph 20), the ration salvo emissions are not considered; In this work, from sources No. 1; No. 2 of the fields of dispersion of harmful substances, the calculation was made according to the program "Rainbow". According to the calculations, the maximum concentration of metal dust at the border of the site is 0.33. Maximum permissible concentration at a fixed quota is 0.33. For other substances, the maximum permissible concentration at the boundary of the site is below 0.05. For each enterprise source, the maximum permissible emissions of pollutants into the atmosphere are calculated. The actual value is taken as the MPE (maximum permissible emission) standard for all emission sources.

When upgrading and reconstructing the pumping station, drinking water is brought by water tank trucks from the nearest water supply system of the Kagan district for labours and employees. Drinking water is stored in a 2.0 m^3 tank. Drinking water is used for household needs and cleaning. Water consumption for household needs of repair group personnel is 1.0 m^3/ day or 260.0 m^3 / year, water consumption in shower compartments is 1.0 m^3 / day or 260.0 m^3 / year, drinking water consumption for cooking in the canteen is 0 , 4 m^3 / day or 228.8 m^3 / year, for cleaning floors, water consumption is 0.1 m^3 / day or 26.0 m^3 / year. Discharge of household sewage of 748.8 m^3 / year is carried out in a concreted isolated pit with a volume of 10 m^3. With the accumulation and disinfection of wastewater, sewage disposal vehicles are exported in coordination with the sanitary-epidemiological station of the region for irrigation of decorative trees along the roads.

On the site of modernization and reconstruction of the pump station, there are no areas with green plantings. As the work is temporary, the site will be eliminated upon completion of the reconstruction works. When working on this site, water is taken from a nearby channel for dust suppression using a pump, and the amount of water consumption is 306 m^3 / year. For fire-fighting needs, water intake is provided from the Amu-Bukhara canal. Water is taken in through fire hydrants installed in specially designated areas of the pump station and water consumption is 426.0 m^3 / year.

In the process of upgrading and reconstruction of the pump station, industrial and consumption waste is generated. Industrial waste: black scrap metal, stubs of

electrodes, slag and scale (FeO), oily rags, oily sand, construction waste, worn out overalls, food waste, trash, channel silt. Black scrap metal is formed in the amount of 14.8256 tons/year, as a result of the replacement of obsolete technological equipment, pipelines and stop valves. Stubs of electrodes are formed in the amount of 0.02 tons per year during electric welding operations. Slag and scale (FeO) are formed in the amount of 0.0015 tons/year as a result of electric welding. Black scrap metal, stubs of electrodes, slag and scale (FeO) are stored on the territory of the pump station on a specially designated site and, as they accumulate, they are exported under the “Vtorchermet” contract of Kogon city for further shipment to the Bekobad Metallurgical Plant.

Oily rags are formed as a result of wiping oily surfaces, equipment parts in the amount of 0.0035 tons/year. Waste is temporarily stored in a container in a specially designated place. With the accumulation, it is constantly sent to the ACMP (asphalt concrete mixing plant) of Kogon district for mixing with inert materials.

Oily sand is formed in the amount of 0.027 tons/year as a result of the removal of the spill area of the oil from the surface during its replacement on the process equipment and accidental spills during the annual time interval. The waste is temporarily stored in a container in a designated place. With the accumulation, it is constantly sent to the ACMP (asphalt concrete mixing plant) of Kogon district for mixing with inert materials.

Worn overalls are formed in the amount of 0.14 tons/year and waste is temporarily stored in a warehouse. Further, one part is used as a rag, and not suitable part is taken to the landfill of Kogon district according to the agreement with the State Unitary Enterprise “Toza Hudood” for burial. Weed impurities are formed during the operation of the de-cleaning machine when cleaning the trash racks in the amount of 30.0 tons/year. Waste is temporarily stored in a container and, as it is accumulated with household waste is transported to the landfill site of the Kogon district according to an agreement with “Toza Hudood”. Food waste is generated in the amount of 0.624 tons/year. Waste at the end of the working day is exported to feed the livestock of the population. Wastepaper is formed in the amount of 0.0044 tons/year and it is temporarily stored in a container, in a specially designated place and, as it accumulates, it is transferred to the waste items of the city of Kogon.

Channel silt is formed in the process of cleaning the approach channel of Kuyu-Mazar pump station. The amount of channel silt waste is 623 tons/year. After planning, this site is planted with perennial decorative trees: elm, mulberry trees and spruce trees in order to improve the environmental situation in the area of Kuyu-Mazar pump station. Consumption waste and solid household waste (SHW) in the amount of 2.0 tons/year are also generated, and this waste is transported daily to the landfill of Kogon district under an agreement with the State Unitary Enterprise “Toza Hudood”.

All waste generated at the enterprise has temporary storage of production and consumption waste. Also, all production and consumption wastes are recycled or used for own needs.

The operation will not lead to irreversible environmental consequences. The project has developed measures to reduce the negative impact of the planned activities of the enterprise, such as preventing emergencies, cleaning air emissions, protecting water sources and reducing harmful effects on the soil.

Prior to the commissioning of this facility, develop a design “Statement of Environmental Consequences” and submit it to State Ecological Expertise for an extension of the operation.

It is necessary to take control over the compliance with environmental legislation during construction, paying particular attention to the inadmissibility of unauthorized cutting of woody vegetation.

The State Unitary Enterprise Center for State Ecological Expertise of Bukhara region agrees on a design statement on the impact on the environment "Modernization and reconstruction of Kuyu-Mazar pump station located on the territory of Kogon district”.

The conclusion of the state ecological expertise on the compliance of the facility of the state ecological expertise with environmental requirements has a legal power for 3 (three) years from the date of its issuance.

The departments for the protection of land and water resources, as well as Kogon district of the Department for Ecology and Environmental Protection of Bukhara region, must take control of compliance with the requirements of environmental

legislation when choosing a site for construction and avoid starting work without agreeing on the Environmental Impact Statement.

The conclusion of the state environmental review on the admissibility of the project does not replace and does not cancel the need to obtain the relevant permitting documents according to the procedure established by the law.

The head of the department: Niyazov A.

To the head of the permanent establishment of “HEBEI CONSTRUCTION GROUP CO.LTD”
Mr ZHENG SUCHEN
Copy: To the chief of Kiziltepa district inspection of ecology and environmental protection
S. Rakhmonov
Copy: Chief Specialist in Accounting, Coordination of Environmental Standards and Interactions with Inspections
U. Botirov

THE CONCLUSION OF THE STATE ENVIRONMENTAL ASSESSMENT

Facility: Adjustment of the project EIS "Modernization and reconstruction of "Kiziltepa" pump station located on the territory of the second section of "Mekhnat Rohat" area of Kiziltepa district, Navoi region".

CLIENT: “HEBEI CONSTRUCTION GROUP CO.LTD”

DESIGNER: LLC “ECOXIM NAVOIY”

The materials of the EIS project adjustment on the modernization and reconstruction of “Kiziltepa” pump station located on the territory of the second section of "Mekhnat Rohat" area of Kiziltepa district, Navoi region are presented for state environmental assessment.

Kiziltepa pump station serves to supply water to the irrigated territories of Navoi and Bukhara regions from the Amu-Bukhara canal with two branches of pressure pipelines, including Harkhur (raising height 45m), Shofrikon (raising height 65m).

Kiziltepa pump station and the pipelines have been operated since 1975. The nearest locality of Aironchi mahalla is located on the northeast side at a distance of 6.8 km from Kiziltepa pump station.

The pump station borders:

From the north, east and west- district grasslands;

From the south- district grasslands, fisheries and lake Tudakul in 4 km.

Approach canal; trash rack structure; pump station building; the area of the pipeline; anchoring support No.1; pressure pipeline with the diameter of 3200 (Kharkhur branch); pressure basin (Kharkhur branch; Kharkhur branch of ABC; pressure pipeline-3600 (Shofrikon branch); pressure basin (Shofrikon branch); Shofrikon branch of ABC; electric power station 6 X 35 kW; bulkhead; desilt basin of technical water No. 1; desilt basin No.2; DPS and storage room; security post is located in the territory of Kiziltepa pump station of ABMC.

Design and the actual throughput of Kiziltepa pump station of ABMC of Shofrikon branch with the length of -25,7 km; d-3600mm, design flow rate-90m^3/sec; actual flow rate- 80m^3/sec; Kharhkur branch with the length of -14 km; d-3200 mm; design flow rate-60m^3/sec; actual flow rate- 55m^3/sec.

The results of the project from the realization of these actions will include:

Rehabilitated and modernized pump stations will ensure more effective and guaranteed water supply;

Modernized system of the machine channel will supply water in accordance with the requirements and minimize water loss;

Demonstration plots created to show improved management of water resources on the onfarm level will improve the efficiency of the onfarm system;

Greenhouse gas emissions from the pump stations will be reduced by upgrading and optimizing cost, taking into account expected impacts from the expected climate;

Institutional reforms, capacity building will assist in the effective management of the project and irrigation system.

After modernization of the pump station, the water supply will increase to 25,2 m^3/sec or to 25 % from the existing pump capacity. Demand for electricity will decrease to 16000 kW or to 15%.

As a result of the modernization and reconstruction of existing units, four sources of emissions are foreseen of which 0,805351 tons/year of 11 pollutants will be sent to the atmosphere of which permanent 0,04494 tons/year.

Dust-gas cleaning equipment is not applied.

The calculation of surface concentrations generated by the emissions of pollutants showed that at the enterprise's boundary the established quotas will not be exceeded.

Water supply for domestic and drinking purposes is carried out by delivering the water from Kiziltepa town. Drinking water consumption is 774,8 m^3/year.

No process effluent is formed, water is used irrevocably.

Domestic wastewaters are discharged into a concrete pit with a capacity of -10.0 m^3, and as they accumulate, they are taken out for irrigation of green spaces with the consent of the sanitary and epidemiological station (SES).

38,536 tons of black scrap metal; 0,02 tons of electrode waste; 0,0015 t/year of slag and dross; 0,0035 t/year of oily rags; 0,027 t/year oily sand; 0,14 t/year worn out overalls; 0,624t/year food scraps are formed as a result of modernization and rehabilitation of existing units.

The emergency which will negatively affect the environment is not expected.

According to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 949 dated November 22, 2018, this facility belongs to the 3rd category of environmental impact.

The conclusion of the state environmental review on the admissibility of the project realization is valid for three years, in case of failure to carry out the planned work during this period or change of project decisions, EIS project should be re-developed and submitted to the state environmental expertise in accordance with the established procedure (clause 26 Annex to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 949 dated November 22, 2018).

The conclusion of the state environmental review on the admissibility of the project implementation does not replace or cancel the need to obtain the necessary permission documents according to the procedure established by the Law.

Navoi Regional Department of Ecology and Environmental Protection coordinates the adjustment of the project EIS "Modernization and reconstruction of "Kiziltepa"

pump station located on the territory of the second section of "Mekhnat Rohat" area of Kiziltepa district, Navoi region".

The chief of Kiziltepa district inspection of ecology and environmental protection has to take under control the execution of environmental protection measures:

-removal and disposal of waste, as well as effluent stream.

The head of the department: Sh. Khudaykulov

ANNEX IV TRAINING ON HSE

HSE Training

22 June 2019

22 June 2019

HSE Training Attendance Record

TRAINING ATTENDANCE RECORD

VENUE : Bukhara

SUBJECT TRAINED: General Introduction to HSE Training

DATE : 22.04.2017

DESCRIPTION : Kiziltepa and Kuyumazar Contractors have been trained on type of HSE trainings and records keeping

TIME STARTED: 10:45

TIME FINISHED : 11:45

LIST OF ATTENDEES

NO	NAME AND SURNAME	CONSTRUCTION SITE	SIGNATURE
1	Miao Guo Wang	KM HSE officer	
2	Bakhodir Tillaboev	KT-KM HSE Lead	
3	Zhang Zelhui	KT HSE officer	
4	Zhao Guizhe	Translator	
5	Sattarova Nafisa	Translator	
6			
7			
8			
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11			
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