

Environmental Monitoring Report

Semestral Report

Project number: 44458–013

Loan Numbers: 3025, 3026

March 2020

Period covered: July–December 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/ 3026-UZB)

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

Endorsed by: A. Nurettin Demir 03/01/2020

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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 REHABILITATION PROJECT.
2. This report is the 9th 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), 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 1 given 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	
	<p>Organization: Asian Development Bank</p> <p>Staff Name: Syed Asim Ali Sabzwari</p> <p>Designation: Environment Specialist, CWOD-PSG</p> <p>Email: asabzwari@adb.org</p> <p>Staff Name: Feruza Insavaliyeva</p> <p>Designation: Associate Safeguards Officer, URM</p> <p>Email: finsavaliyeva@adb.org</p> <p>Tel: + 998 78 1401920</p> <p>ADB/RETA International Environmental Safeguards Consultant: Ketil Dgebuadze</p> <p>Email: kdgebuadze.consultant@adb.org</p> <p>Tel: +995 322 250619</p>
	Borrower/PIU
	<p>Ministry of Water Resources of Uzbekistan Republic</p> <p>Organization: Project Implementation Unit</p> <p>Environmental Staff: Mr. Sardor Pulatov</p> <p>Email: abisr@mail.ru</p> <p>Tel: +998 99 895 82 31</p>
	Supervision Consultant
	<p>Organization: JV Temelsu International Engineering Services Inc. Sheladia Associates Inc</p> <p>Environment Specialist (International): Mr. Saban Cimen</p> <p>Email: saban.cimen@temelsu.com.tr</p> <p>Tel: +998 90 317 36 11</p> <p>Environment Specialist (local): Mr. Sherzod Sunatulin</p> <p>Email: shonic1987@mail.ru</p> <p>Tel: +998 90 966 59 54</p>
	Contractors
	<p>Construction of Amu Bukhara 1 NEW Pump Station (ABISRP 01)</p> <p>China National Technical Import and Export Corporation (CNTIC)</p> <p>Environmental Staff: Yang Guo You</p> <p>Email: -</p> <p>Tel: -</p>
	<p>Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02)</p> <p>Consortium LLC "Kogon Suv Qurilish" and JSC "Amubukhorokanalkurilish"</p> <p>Environmental Staff: -</p> <p>Email: -</p> <p>Tel: -</p>
	<p>Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03)</p> <p>Modernization & Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.01)</p> <p>Hebei Construction Group Co., Ltd, Hebei Province, China</p> <p>Environmental Staff: Mr. Miao Guowang</p> <p>Email: 66326632@qq.com</p> <p>Tel: +998972812666</p>
	<p>Modernization & Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.02)</p> <p>Hebei Construction Group Co., Ltd, Hebei Province, China</p> <p>Environmental Staff: Mr. Zhang Zehui</p>

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 Staff: Mr. Izomov Amin Ashurovic Email: - Tel: -
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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 Mr. Sherzod Djuraev is the PIU's Monitoring and Evaluation Specialist (M&ES) has been replaced with Mr. Sordor Pulatov. Mr. Pulatov 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 PIU Environmental Monitoring and Evaluation 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) – Sherzod Sanatulin 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. Bid evaluation for Contract on Construction of Amu Bukhara 1 New Pump Station (ABISRP 01) has been finalized and the Contract has been signed with China National Technical Import and Export Corporation on 02/08/2019. Following that the advance

- payment has been made and the Contract became effective on 05/09/2019. The construction works has not been started yet.
16. Regarding to the Contract of the Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02), the completion date of contract was extended until 12/04/2020, which was previously till 12/04/2019. During the reporting period, the construction activities have been carried out within the scope of the contract are rehabilitation of Peresechenie and Kharkhur regulating structures.
17. Under the Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03) there are two contracts: Modernization & Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.01)) and Kizil Tepa Pump Station (ABISRP 03.2). Contracts were signed and became effective by September 2017. The contractor of both contracts is the same company named Hebei Construction Group Co.Ltd. The construction works related on these contracts are in progress.
18. The main project activities carried out during the reporting period include the following:

Table 2-2 Construction Activities Carried out During Reporting Period (July 2019 - December 2019)

Site	Construction Activity	Number of Workers	
		Maximum	Minimum
Construction of Amu Bukhara 1 New Pump Station (ABISRP 01)			
Bukhara-Olot	Construction activity not started		
Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02)			
Kharkhur	Kharkhur Regulating Structure	15	5
Peresechenie	Peresechenie Regulating Structure	11	5
Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1)			
Bukhara-Kuyu Mazar	Kuyu Mazar Pump Station	50	20
Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2)			
Navoi-Kizil Tepa	Kizil Tepa Pump Station	70	30

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

20. A map of construction sites during the reporting period are given at the Figure 2-1.
21. The construction works at Kuyu Mazar and Kizil Tapa Pump stations have been started during the (6th) reporting period (January 2018 - June 2018) and has not been fully completed yet.

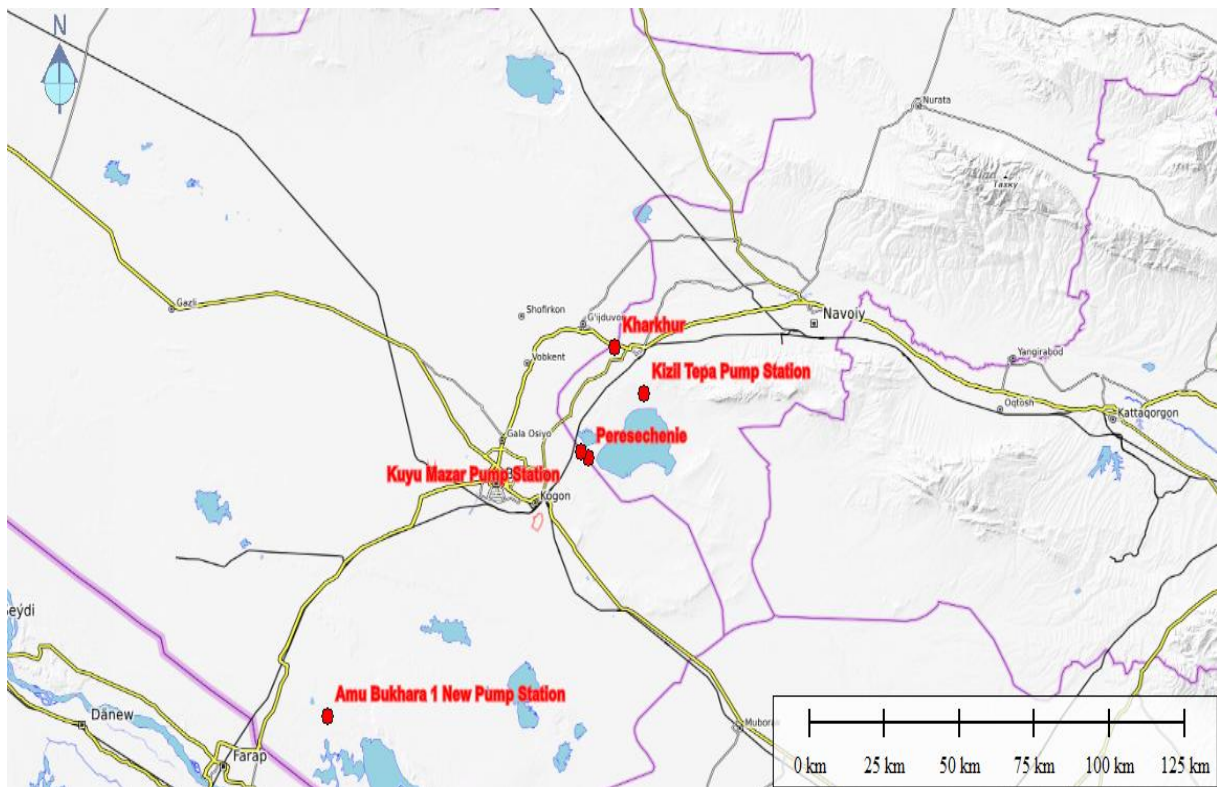


Figure 2-1 Map of Construction Sites Showing Construction Activities Carried out During Reporting Period (July -December 2019)

22. The construction work at Kharkhur area has been started during the previous reporting period (January 2019- June 2019) and has not been completed yet. The construction work at Peresechenie area has been started during July-December 2019 reporting period.
23. 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

24. 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

25. The activities carried out during the reporting period by the environmental staff who are related to the project activities have been summarized at the following Table 3-1.

Table 3-1: Environmental Safeguards Activities Carried out During Reporting Period (July 2019 - December 2019)

Environmental Safeguard Activities
<p>The International environmental expert (Saban Cimen) of Supervision Consultant (EEC)</p> <ul style="list-style-type: none"> - Briefing the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the environmental, health and safety related contract obligations (ABISRP 01) (02/August/2019) - Site audit to Kharkhur project area within the scope of Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (28/September/2019) - Site audit to Kizil Tepa Pump Station construction area (28/September/2019) - Site audit to Kuyu Mazar Pump Station construction area (28/September/2019) - Site audit to Kizil Tepa Pump Station construction area (27/December/2019) - Site audit to Kharkhur and Peresechenie project areas within the scope of Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (28/December/2019) - Site audit to Kuyu Mazar Pump Station construction area (28/December/2019) - Review of SEMP of Amu Bukhara 1 New Pump Station (ABISRP 01) (30/October/2019) - Preparation of site visit report for project activities (07/November/2019) - Briefing the HSE Staff of Kizil Tepa Pump Station Contactor (ABISRP 03.2) (27/December/2019) - Briefing the HSE Staff of Kuyu Mazar Pump Station Contactor (ABISRP 03.1) (28/December/2019) - Meeting with the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the environmental, health and safety related issues in Bukhara (ABISRP 01) (28/December/2019) - Meeting with the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the preparation of SEMP in Tashkent (ABISRP 01) (30/December/2019) - Construction of Amu Bukhara 1 New Pump Station (ABISRP 01)
<p>Construction of Amu Bukhara 1 New Pump Station (ABISRP 01) (Responsible Environmental Manager: Yang Guo You)</p>

Environmental Safeguard Activities
<ul style="list-style-type: none"> - Submitted first version of SEMP (25/October/2019). - Submitted of second, updated version of SEMP (27/December/2019)
Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) (Responsible Environmental Manager: Not designated) <ul style="list-style-type: none"> - During the reporting period the contractor has not submitted any environmental monitoring reports, conducted training or activity etc. Therefore, 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) <ul style="list-style-type: none"> - Preparation of environmental monitoring reports (June, July, August, September, October, November, December) - Training of Working Staff on Environmental Issues
Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) (Responsible Environmental Manager: Zhang Zehui) <ul style="list-style-type: none"> - Preparation of environmental monitoring reports (June, July, August, September, October, November, December) - Training of Working Staff on Environmental Issues.

3.2 Site Audits

26. 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 (July 2019 - December 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.
28.09.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 02 has almost completed construction activities except Kharkhur. PPE has not been used.	Daily check, and immediate cautions to the Contractor.

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Date	Conducted by	Purpose	Findings	Corrective Actions
28.09.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 03.1 Kuyu Mazar Health and safety labels and signs and measures used on site increased, hazardous waste separation containers are in use, health, safety and environmental training records are kept but the solid waste disposal records are not kept, ventilation has been provided in confined spaces.	Keep the solid waste disposal records regularly.
28.09.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 03.2 Kizil Tepa, environmental officer is hired as Zhang Zehui, labels and signs and measures used on site increased, health, safety and environmental training records are kept regularly.	No action is required.
27.12.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 03.2 Kizil Tepa: Some fire extinguishers' expiration date passed. Health and safety training records not kept regularly. Demolished concrete left on site.	Replace the fire extinguishers which are expired. Keep the record regularly. Dispose the demolished waste to a site shown by the authorities.
28.12.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 02 has almost completed construction activities except Kharkhur. The activities at Peresehenie area continues. No workers were observed in field during audit, except guards.	Daily check, and immediate cautions to the Contractor.

Date	Conducted by	Purpose	Findings	Corrective Actions
28.12.2019	Saban Cimen (SC)	General, Environmental and OHS	Contractor ABISRP 03.1 Kuyu Mezar: Hazardous solid waste collection and separation not active. Solid waste disposal records not kept regularly. Safety measures properly not applied.	Keep the record regularly. Put in progress again hazardous solid waste collection and separation. Keep the record regularly. Conduct additional health and safety training for the staff.

27. The contractor of Construction of Amu Bukhara 1 New Pump Station (ABISRP 01) has submitted first version of Site Environmental Management Plan (SEMP) on 25th October 2019 to PIU/SC. The comments given to SEMP by PIU/SC has been delivered to the contractor on 31st October 2019. Second, updated version of the SEMP has been received on 26th December 2019 only in Russian version and asked for English version for revision.
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 has not submitted any EMR for months between July 2019 and December 2019. ABISRP 02 Contractor has no intention neither to submit Monthly Progress Reports nor EMRs. Despite of repetitive warnings, ABISRP 02 Contractor doesn't pay attention to correct environmental non-compliances.
30. Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) contractor has issued the EMR for June, July, August, September, October, November and December on time. The quality for improving the reports have been discussed with the Contractor on 28 September 2019.
31. Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) contractor has issued the EMR for June, July, August, September, October, November and December on time. The quality for improving the reports have been discussed with the Contractor on 28 September 2019.

32. Mr. Miao Guowang is the Health, Safety and Environmental Manager of Kuyu Mazar Pump Station (ABISRP 03.1) contractor. The local Health, Safety and Environmental expert of the contractor, named Mr. Bakhodir Tilmanbayev has resigned on 29/November/2019. He was replaced by Mr. Aziz Juraev. The PIU/SC has been informed about this replacement on 31/December/2019.
33. Mr. Zhang Zehui is the Health, Safety and Environmental Manager of Kizil Tepa Pump Station (ABISRP 03.2) contractor in cooperation with local Health, Safety and Environmental expert Mr. Aziz Juraev.
34. It has been declared by Construction of Amu Bukhara 1 New Pump Station (ABISRP 01) contractor that, Mr. Yang Guo You will be in field as the Health, Safety and Environmental Manager of the contractor. The contractor has already appointed Mr. Kahraman Sergev as local Health, Safety and Environmental expert.
35. 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, Djilvan Regulator has been completed. In the Kharkhur regulator area there are still minor works need to be completed. Construction works in the Peresechenie regulator area in progress. (See Annex II).
36. Amu Bukhara Main Canal Regulating Structure (ABISRP 02): The workers camp and equipment and vehicles exist in Kharkhur and Peresechenie area. Sites are considered to be clean, excess excavated material stored on site. The demounted gates remain in site which need to be gathered and stored by the Canal authority. The concrete has been carried from the existing concrete plants. Therefore, no chemical or hazardous material has been observed on site. Excavated materials and pipes has been stored at nearby areas.
37. 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 however day by day recording has not been applied for health and safety training records. Health and safety conditions, social leisure areas have been created for the workers. Environmental and health and safety labelling has been improved at the sites, nevertheless, needs observation. Hazardous waste management storage area developed and separation of solid wastes in progress. See performance evaluation form at the Annex I.

38. 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 established, however daily recording has not been applied for solid waste records. Health and safety conditions, social leisure areas have been created for the workers. Environmental and health and safety labelling has been improved at the sites, nevertheless, needs observation. Hazardous waste management storage area developed but separation of solid wastes is not actively applied. See performance evaluation form at the Annex I.
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. 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 the 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. 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 the ecological report which is attached to this permission that “After levelling, perennial decorative trees, such as elm, mulberries and spruce shall be planted”. The contractor should settle the planting of the levelled spoil area with the Bukhara Ecology and Environmental Protection Headquarter.
41. Status of non-compliances revealed for previous period are provided in the Tebale XX below:

Table 3. Statuses of non-compliances revealed for previous reporting period

#	Non-compliance	Corrective action proposed	Responsible person	Implementation status
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1.	The quality of Contractor's EMR of Kuyu Mazar and Kizil Tepa Contractor needs to be improved	Review of Contractor EMR and Propose new outline and content	Saban Cimen Environmental Staff of the Kuyu Mazar and Kizil Tepa Contractor	EMR outline and content discusses and Staff of the Contractors submitted report according to the new format. Further development is needed.
2	Labels and Signs about Environmental Concerns and Health and Safety Kuyu Mazar Contractor needs to be improved	Improve labelling	Environmental Staff of the Kuyu Mazar Contractor	It has been observed that the signs and labels used in the site increased in amount and quality. SC shall make the daily observation and remarks during the construction phase
3	Hazardous Waste Storage Area will be arranged in Kuyu Mazar	Containments shall be constructed for hazardous waste	Environmental Staff of the Kuyu Mazar Contractor	Containers in place but separation and collection is poor.
4	HSE training records could not be provided in Kuyu Mazar	Train the Environmental Staff of the Kuyu Mazar Contractor	Saban Cimen Environmental Staff of the Kuyu Mazar Contractor	Training provided. HSE training conducted and reported regularly by the Contractor. Records of training have been kept in the working camp office.

5.	Levelling and Planting the Spoil Area need to be done in Kuyu Mazar	The Contractor will settle the planting issue with Novai Ecology and Environmental Protection Headquarter and perform the required actions	Kuyu Mazar Contractor	The contractor hasn't settled yet the planting of the levelled spoil area with the Novai Ecology and Environmental Protection Headquarter.
6	Ventilation in Welding area is Poor in Kuyu Mazar	Provide Ventilation	Kuyu Mazar Contractor	The Contractor has provided ventilation at the welding area
7	Labels and Signs about Environmental Concerns and Health and Safety Kizil Tepa Contractor needs to be improved	Improve labelling	Environmental Staff of the Kizil Tepa Contractor	It has been observed that the signs and labels used in the site increased in amount and quality. SC shall make the daily observation and remarks during the construction phase.
8	Hazardous Waste Storage Area will be arranged in Kizil Tepa	Containments shall be constructed for hazardous waste	Environmental Staff of the Kizil Tepa Contractor	Containers in place but separation and collection is good.
9	HSE training records could not be provided in Kizil Tepa	Train the Environmental Staff of the Kizil Tepa Contractor	Saban Cimen Environmental Staff of the Kizil Tepa Contractor	Training provided. HSE training conducted and reported regularly by the Contractor.

				Records of training have been kept in the working camp office.
10	Levelling and Planting the Spoil Area need to be done in Kizil Tepa	The Contractor will settle the planting issue with Bukhara Ecology and Environmental Protection Headquarter and perform the required actions	Kizil Tepa Contractor	The contractor hasn't settled yet the planting of the levelled spoil area with the Bukhara Ecology and Environmental Protection Headquarter.
11	Hiring National Environmental Specialist is needed	Hire a National Environmental Specialist in SC team	SC	SC hired Mr. Sherzod Sanatulim as National Environmental Specialist

3.3 Issues Tracking (Based on Non-Conformance Notices)

42. During the previous reporting period (January 1st, 2019- June 30th, 2019) the observed Non-Conformance issues have been recorded and are given below in the table related to the construction activities of project components. The following table gives the present situation on these tracked non-conformance notices.

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 (28/12/2019)
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 (28/10/2019)

Non-Conformances	Corrective measures	Implementation deadline
ABISRP – 02		
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 (28/10/2019)
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 (28/10/2019)
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)
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)

43. Despite of repetitive warnings, ABISRP 02 Contractor doesn't pay attention to correct actions related to reporting the activity therefore this non-conformance issue remains open.
44. During the reporting period (July 1st, 2019- December 31st, 2019) 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, except the levelling and planting of the dredged material storage area which has still time till deadline agreed with the contractor.
45. During the reporting period (July 1st, 2019 – December 31st, 2019) the observed Non-Conformance issues have been recorded and are given below in the table for 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 – 01		
SEMP not completed	Finalize SEMP	31/01/20 (Open)
ABISRP – 03		

Non-Conformances	Corrective measures	Implementation deadline
At ABISRP 03.01 Kuyu Mazar Construction Site some fire extinguishers' expiration date passed	Replace the fire extinguishers which are expired	31/01/20 (Open)
At ABISRP 03.01 Kuyu Mazar Construction Site Health and safety training records not kept regularly	Keep the record regularly	04/01/20 (Open)
At ABISRP 03.01 Kuyu Mazar Construction Site Demolished concrete left in site	Dispose the demolished waste to a site shown by the authorities	27/02/20 (Open)
At ABISRP 03.02 Kizil Tepa Construction Site Solid waste disposal records not kept regularly	Keep the record regularly	04/01/20 (Open)
At ABISRP 03.02 Kizil Tepa Construction Site Hazardous solid waste collection and separation not active	Put in progress again hazardous solid waste collection and separation	11/01/20 (Open)
At ABISRP 03.02 Kizil Tepa Construction Site Safety measures properly not applied	Conduct additional health and safety training for the staff	31/01/20 (Open)

46. During this reporting period (July 1st, 2019 – December 31st, 2019) 7 Non-Conformance issues have been recorded in total, out of 7 only 4 of them has been closed. Total number of Non-Conformance issues observed for Project is 40, out of which 75% has been closed. (Table 3-3).

Table 3-4 Summary of Issues Tracking Activity for Current Period

Total Number of Issues for Project	40
Number of Open Issues	10
Number of Closed Issues	30
Percentage Closed	75%
Issues Opened This Reporting Period	7
Issues Closed This Reporting Period	4

47. 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

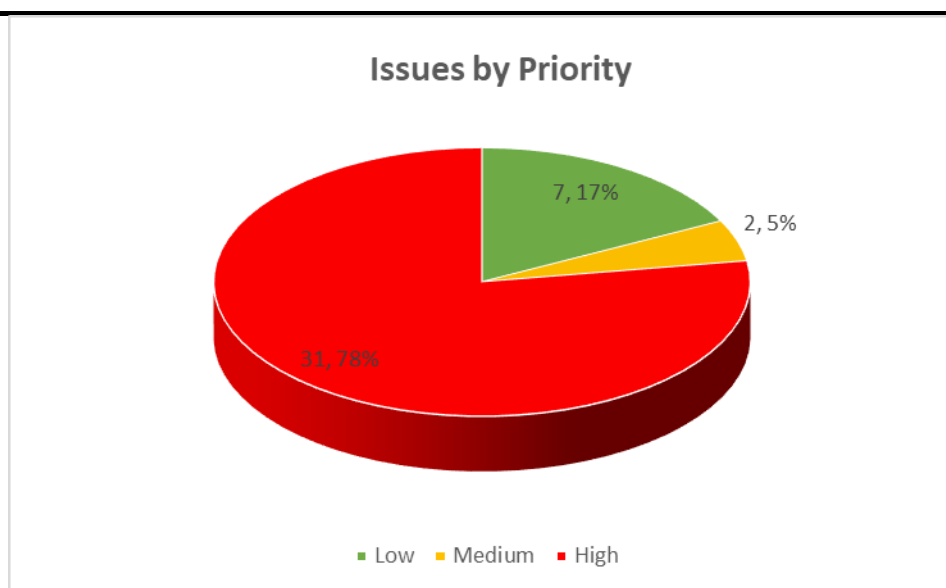
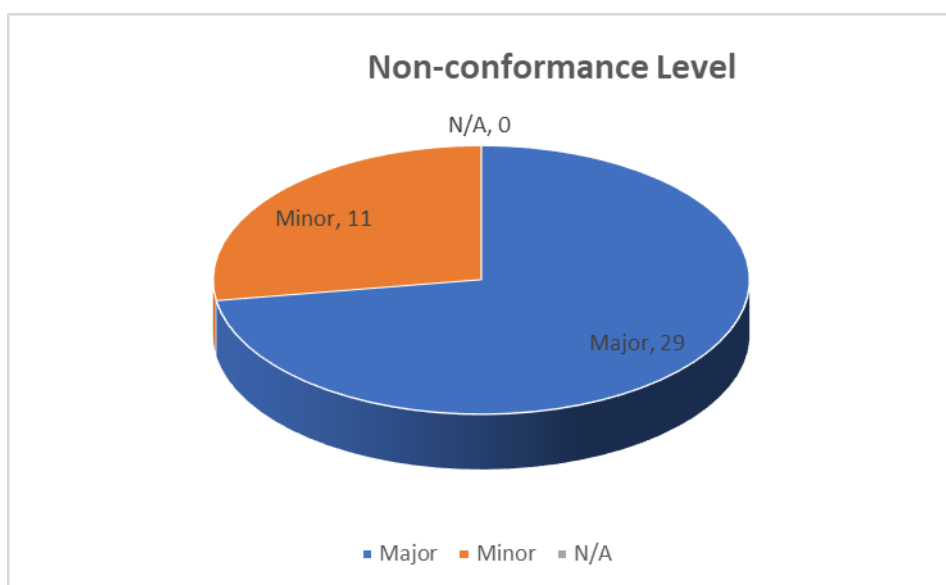
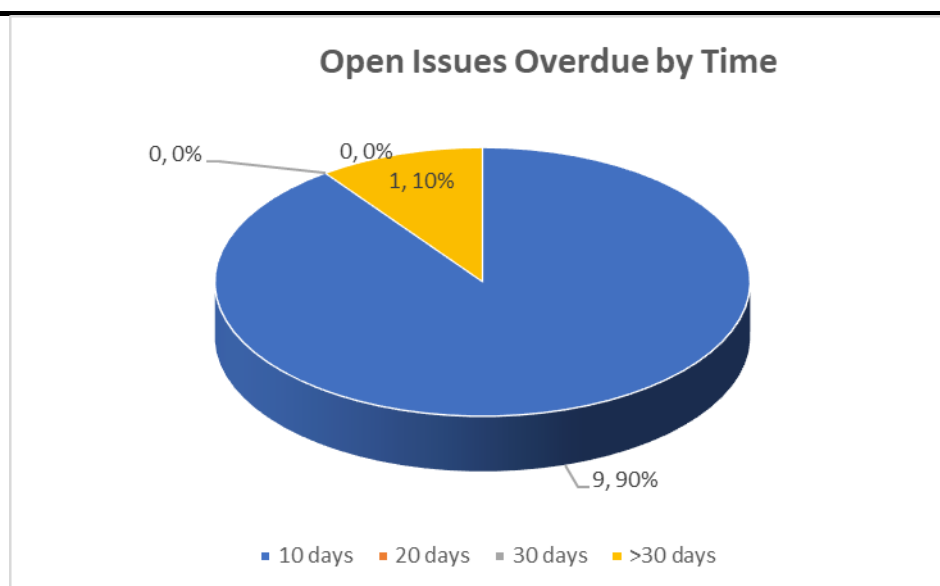


Figure 3-2: Summary of Issues by Non-Conformance



48. Duration to close any issue takes approximately 6 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

49. 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%
9	7	40%	60%

3.5 Unanticipated Environmental Impacts or Risks

50. During the reporting period (July 1st, 2019 – December 31th, 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. This paragraph gives a short explanation about the background data status. According to the EMP quality of irrigation water and soil quality data would be collected only at the beginning phase from the relevant government authorities. Only water data could be collected within period indicated in the presented report.
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 exist in Kharkhur regulator area and in the Peresechenie regulator area. But their conditions are poor. Since the number of workers are less in number, the wastewater produced during the daily activities have been directly filtered to the ground. The contamination risk of these effluents to the canals are low.
59. Closed septic tanks exist 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. 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

61. The contractors have fit the daily regular working hours. It has been reported in EMR of Contractors to use 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.
62. 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 noise 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

Premises and territories	Equivalent sound pressure levels, L_{eq} (dB)									Level of Sound, (dBA)
	31,5	63	125	250	500	1000	2000	4000	8000	
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

63. The Sanitarian Rules and Norms on providing allowed noise level into the living building, public building and territory of living area (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 buildings (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
	Night-time 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
	Night-time 23:00-07:00	67	57	49	44	40	37	35	33	45

64. The World Bank's "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

65. 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.
66. At the Annex IV of previous 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 64) results which are given 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

67. 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.
68. During the assembling and disassembling of pumps at Kuyu Mazar Pump Station (ABISRP 03.1) and 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

69. 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

70. 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

71. 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

72. As indicated in paragraph 69 material records have not been kept. Therefore, cumulative progress not included into the EMR.

4.5 Waste Management

73. Amu Bukhara Main Canal Regulating Structure Contractor hasn't signed any contract related to the waste disposal yet. When the activities start in the construction camp this will be one of the initial requirements.
74. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor hasn't signed any contract related to the waste disposal. The waste originated from 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 is valid until the 31st December 2019. This protocol will be revised at the next reporting period.

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 is valid until the 31st December 2019. This protocol will be revised during the next reporting period.

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 July – 30th December 2019) the Contractor of Modernization and Rehabilitation of Kuyu Mazar Pump Station (ABISRP 03.1) was not able to provide the solid waste disposal records. However, the transfer and disposal of solid waste has been realized by Toza-Khudud firm. The contractor has been asked to provide the relevant data until 04/01/2020.
83. During the reporting period (1st July 2019 – 31st December 2019) the Contractor of Modernization and Rehabilitation of Kizil Tepa Pump Station (ABISRP 03.2) has dumped thirteen times domestic solid waste to the site defined at Paragraph 78. The recorded disposals are given in the following table below. The transfer and disposal of domestic solid waste has been realized by Toza-Khudud firm.

Date of Solid Waste Transfer	Volume 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	
25, July, 2019					3	Toza-Khudud
21, August, 2019					3	Toza-Khudud
30, August, 2019					3	Toza-Khudud
06, September, 2019					4	Toza-Khudud
19, September, 2019					4	Toza-Khudud
28, September, 2019					4	Toza-Khudud
8, October, 2019					7	Toza-Khudud
18, October, 2019					7	Toza-Khudud

28, October, 2019					7	Toza-Khudud
11, November, 2019					7	Toza-Khudud
22, November, 2019					7	Toza-Khudud
12, December, 2019					7	Toza-Khudud
20, December, 2019					7	Toza-Khudud
EMR-9 TOTAL	0	0	0	0	70	

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 area 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 171.4 m³ of solid waste has been originated within the scope of Amu Bukhara Irrigation System Rehabilitation Project. Approximately 25% of this waste volume has been restored for reuse and recycling purposes at the premises of ABMK Kizil Tepa storage areas. The progress in solid waste disposal has been shown in the 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	18	0,00	26,88	0
9	-	-	70	-		
Total	57,5	0	113,9	42	171,4	42

4.6 Health and Safety

4.6.1 Community Health and Safety

87. During the reporting period (1st July – 31st December 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 July – 31st December 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. It has been observed during the site audit on 28/September/2019 this ventilation problem has been solved.
90. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor have carried out the construction activities in the Peresechenie and Kharkhur regulating structures. 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. Kuyu Mazar Pump Station (ABISRP 03.1) contract and Kizil Tapa Pump Station (ABISRP 03.2) contract.
92. During site audit on 28/December/2019 it has been observed that the implementation of safety rules is poor in Kuyu Mazar Pump Station (ABISRP 03.1) construction site. Technical staff was smoking at the fuel storage area. The smoker has been warned by SC and HSE manager Mr. Miao Guowang immediately and informed about the results of his activity. It has been advised to HSE manager Mr. Miao Guowang to conduct a safety training until 31/January/2020.

4.7 Training

93. 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 July 2019 – 31st December 2019).
94. Mr. Zhang Zehui as the Health and Safety Specialist of Kizil Tapa Pump Station (ABISRP 03.2) contract has conducted numerous HSE trainings for the Chinese staff working at the Kizil Tapa construction site during the reporting period (1st July 2019 – 31st December 2019).
95. Mr. Bakhodir Tillaboev and his successor Mr. Aziz Juraev as local HSE administrator of Kuyu Mazar Pump Station (ABISRP 03.1) contract and Kizil Tapa Pump Station (ABISRP 03.2) contract has conducted numerous HSE trainings for the local staff working at both sites during the reporting period (1st July 2019 – 31st December 2019).

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

96. SEMP by the contractor of Construction of Amu Bukhara 1 New Pump Station (ABISRP 01) have been submitted on 25/October/2019. The comments have been provided to the contractor to revise and submit SEMP as soon as possible on 31/October/2019. The contractor has submitted of second version of SEMP on 26/December/2019 but only Russian. The contractor has been asked to provide the second version in English and in Russian until 31/January/2020.
97. Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor has submitted the SEMP just to fulfil its administrative obligations. However, the contractor acts as unaware of existence of SEMP which has been submitted third revision on 24th January 2017 and has received conditionally no objection on date 20th December 2016) and doesn't submits EMR accordingly. Unfortunately, repetitive cautions have not cared by the Amu Bukhara Main Canal Regulating Structure (ABISRP 02) Contractor.
98. 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.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

99. There isn't any activity that can be recorded as good practice during the reporting period (1st July 2019 – 31st December 2019).

6.2 Opportunities for Improvement

100. 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

101. During the previous reporting (EMR-8) period (January 1st, 2019 and 30th, June 2019) the following environmental safeguard activities have been performed. These activities have been listed to emphasize the frequency of safeguard activities:

- Environmental Review by ADB Mission composed of Ms. Ana Paula Araujo, Environment Specialist, CWOD-PSG/Mission Leader; Ms. Feruza Insavaliyeva, Associate Safeguards Officer, Uzbekistan Resident Mission (URM); Ms. Stephanie Sioson, Senior Operations Assistant, CWOD-PSG; Ms. Ketu Dgebuadze, RETA 9541 International Environmental Consultant. The training by Ketu 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) Contractors 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 17th and 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.

102. During the reporting period (1st July 2019- 31st December 2019) the following environmental safeguard activities have been performed:

- Briefing meeting organized by Saban Cimen SC the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the environmental, health and safety related contract obligations (ABISRP 01) on 02/August/2019.
- Site audit by Saban Cimen to Kharkhur project area (28/September/2019 and 28/December/2019) and Peresechenie project area (28/December/2019) within the scope of Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure.
- Site audit by Saban Cimen to Kizil Tepa Pump Station construction area on dates 28/September/2019 and 27/December/2019.

- Site audit by Saban Cimen to Kuyu Mazar Pump Station construction area on 28/September/2019 and 28/December/2019.
- Preparation of site visit report for project activities by Saban Cimen on 07/November/2019.
- Preparation of first version of SEMP of Amu Bukhara 1 New Pump Station (ABISRP 01) by China National Technical Import & Export Corporation (CNTIC) on 25/October/2019 and review of it by Saban Cimen on 30/October/2019. Second version of SEMP has been submitted on 26/December/2019 on Russian version.
- Briefing the HSE Staff of Kizil Tepa Pump Station Contactor (ABISRP 03.2) by Saban Cimen about the activities and record keeping system on 27/December/2019.
- Briefing the HSE Staff of Kuyu Mazar Pump Station Contactor (ABISRP 03.1) by Saban Cimen about the activities and record keeping system on (28/December/2019)
- Meeting with the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the environmental, health and safety related issues in Bukhara by SC team (ABISRP 01) on 28/December/2019.
- Meeting with the China National Technical Import & Export Corporation (CNTIC) that is the contractor of Amu Bukhara - 1 New Pump Station about the preparation of SEMP in Tashkent by Saban Cimen (ABISRP 01) on 30/December/2019.

7.2 Recommendations

103. Conduct environmental audit by SC on Site environmental and health and safety conditions of the Contractor ABISRP 02, ABISRP 03.01 and 02 sites till the end of next reporting period (Q1-Q2, 2020).
104. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pumping Station (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.
105. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pumping Station (ABISRP 03.1) shall review, arrange and complete the solid waste disposal records until 04/January/200, and keep recording regularly starting from this date.

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106. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pumping Station (ABISRP 03.1) shall effectively put in progress again hazardous solid waste collection and separation which is not functioning properly until 11/January/2020.
 107. The Contractor of Modernization and Rehabilitation of Kuyu Mazar Pumping Station (ABISRP 03.1) shall conduct additional health and safety training for the staff who fails in implementation of safety measures until 31/January/2020.
 108. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pumping Station (ABISRP 03.2) shall leave the disposal site of the dredged material as “levelled and planted” 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. Planting of this site is an issue to be resettled with the Bukhara 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.
 109. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pumping Station (ABISRP 03.2) shall check all the fire extinguishers in the working camp and construction site and replace the ones which are expired.
 110. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pumping Station (ABISRP 03.2) contractor shall review, arrange and complete the health and safety training records until 04/January/200, and keep recording regularly starting from this date.
 111. The Contractor of Modernization and Rehabilitation of Kizil Tepa Pumping Station (ABISRP 03.2) shall dispose the demolished waste, which is all around the sedimentation basin construction site, to a disposal site shown by the authorities until 27/February/2020.
 112. SEMP of Amu Bukhara 1 New Pump Station (ABISRP 01) by China National Technical Import & Export Corporation (CNTIC) shall be finalized until 31/January/2020.
 113. PPE usage at the Peresechenie 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. This will be continuous monitoring activity.

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.

**ANNEX I - PERFORMANCE EVALUATION 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 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
PRE-CONSTRUCTION PHASE									
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	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	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	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	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	N/A	Y	Y	N/A

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Does the Contractor's design include raised walking ways?	By technical review	Once in the review of design documents	CEC	N/A	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	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	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	EIEC	N/A	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	N/A
Does the Contractor have proper survey equipment?	By technical review	Once in the review of design documents	CEC	N/A	N/A	Y	Y	Y	Y
					N/A				

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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	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	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	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	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	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	N/A	Y	Y	Y	Y
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	N/A	Y	Y	N/A

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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	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	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	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	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	EIEC	N/A	N/A	N/A	Y	Y	Y
Does the design consider supplying transformers free of PCB?	By technical review	Once in the review of design documents	EIEC	N/A	N/A	N/A	Y	Y	N/A

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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	Y
Does the design consider the irrigational and drinking water requirements?	By technical review	Once in the review of design documents	MEC	N/A	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	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	N	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	N	Y	Y	Y	Y
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	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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/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	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	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	Y
Has the Contractor defined Environmental Management Officer?	Bidding Documents	Once in bid evaluation phase	C	N/A	Y	Y	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Has the Contractor defined Safety Officer?	Bidding Documents	Once in bid evaluation phase	C	N/A	Y	N	Y	Y	N
CONSTRUCTION PHASE									
Does the Contractor handle the protected plant species, trees taking care of environmental concerns and/or permissions?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the Contractor excavate and preserve the top soil?	Questionnaires	monthly	C	N/A	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	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	N/A	Y	Y	Y	Y
Has the Contractor caused any landslide or erosion?	Questionnaires	monthly	C	N/A	N/A	N	N	N	N
Has the Contractor stockpiles of excavated material for backfilling?	Questionnaires	monthly	C	N/A	N/A	Y	N	N	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Has the Contractor realized the work activities during non-cropping periods?	Questionnaires	monthly	C	N/A	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	N/A	Y	N/A	N/A	Y
Has the Contractor defined spoil disposal site with the local authorities?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the Contractor disposed/recycled the waste material from the construction area?	Questionnaires	monthly	C	N/A	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	N/A
Has the Contractor defined material storage area?	Questionnaires	monthly	C	N/A	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/A	Y	Y	Y	N

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Is the noise level in working area below the defined limit 80 dB(A)?	Questionnaires	monthly	C	N/A	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/A	N	Y	Y	N
Is the nearest residential area affected by the noise level?	Questionnaires	monthly	C	N/A	N/A	N	N	N	N
Has the working activities limited by daylight hours?	Questionnaires	monthly	C	N/A	N/A	Y	N	N	Y
Does the Contractor have a water tanker for spraying water to roads?	Questionnaires	monthly	C	N/A	N/A	N	N	N	Y
Does the Contractor suppress the dust by watering?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	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	N/A	Y	Y	Y	Y
Has the Contractor trained the staff on contingency plan?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Has the Contractor trained the personnel for fuel handling procedure?	Questionnaires	monthly	C	N/A	N/A	Y	N	Y	Y
Does the Contractor train any person for the first aid?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor apply any simple training measure for the visitors?	Questionnaires	monthly	C	N/A	N/A	N	N	N	N
Does the Contractor keep the records for all kind of training?	Questionnaires	monthly	C	N/A	N/A	Y	Y	N	Y
Number of accidents occurred during report period?	Questionnaires	monthly	C	N/A	N/A	0	0	0	0
Does the Contractor supply clean drinking water to the staff?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the Contractor provide the staff hygienic living and working conditions?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor have toilets, baths, sleeping quarter, dining hall for the staff?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Does the Contractor have any social facilities like sporting area, canteen, shuttle vehicles to the local centres, etc.?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor check the health of the staff regularly?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor keep the health record of the staff?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor have adequate fire protection measures?	Questionnaires	monthly	C	N/A	N/A	N	Y	N	N
Has the Contractor made available the first aid kit to the staff?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Has the Contractor provided safe floor and handrails, stairs, lifts where necessary?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Has the Contractor provided the enough ventilation and lightening in the specific areas?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	Y
Has the Contractor provided the safety equipment, material to the staff?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Does security staff exist in the working area?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the working area have fencing in order to protect intrusion?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Has the Contractor defined solid waste storage area?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Has the Contractor defined the area for used material storage?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Contractor apply solid waste separation for recyclable solid waste?	Questionnaires	monthly	C	N/A	N/A	N	N	Y	N
Does the Contractor keep any record for the waste recycled?	Questionnaires	monthly	C	N/A	N/A	N	N	Y	N
Does the Contractor keep any record for the solid waste disposed?	Questionnaires	monthly	C	N/A	N/A	N	N	Y	N
Does the Contractor keep any record for the hazardous waste disposed?	Questionnaires	monthly	C	N/A	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	N/A	Y	Y	N/A	Y
Has the Contractor collected and disposed the solid waste regularly?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Does the Contractor discharge the sewerage after treatment?	Questionnaires	monthly	C	N/A	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	N/A	Y	N/A	N/A	Y
Does the material carried on public roads covered?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the Contractor use the vehicles having the controlled exhaust emissions?	Questionnaires	monthly	C	N/A	N/A	N	Y	Y	N
Does the Roads selected by the Contractor effect the protected areas?	Questionnaires	monthly	C	N/A	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/A	N	N	N	N
Do the Vehicles of the Contractor fit in to the speed limits?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Does the Contractor repair all infrastructure/roads when damage given by them?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Has the Contractor removed the soil if they contaminated?	Questionnaires	monthly	C	N/A	N/A	Y	Y	Y	Y
Has the Contractor left the working area as defined in Landscape section of the Bidding Documents?	Questionnaires	monthly	C	N/A	N/A	Y	N/A	N/A	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/A	N	N	N	N
Number of grievances about the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	N/A	0	0	0	0
Number of grievances solved by the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	N/A	0	0	0	0
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	N/A	Y	Y	N/A
Has the Contractor evaluated the trained O&M staff?	Questionnaires	Once when the project activities completed	MEC/EIEC	N/A	N/A	N/A			N/A

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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			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	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	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	N/A
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	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	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	N/A

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	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Has the fertility and productivity been enhanced?	Questionnaires	Once when the project activities completed	BISA	N	N/A	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/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	N/A	Y	Y	Y	Y
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/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	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	N/A
Irrigated Area (ha)	Measurement	Monthly	BISA/WCA	N	N/A	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	N/A

Amu Bukhara Irrigation System Rehabilitation Project
Environmental Monitoring Report (July 2019 – December 2019)

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 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
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	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	N/A
Water levels of wells in the irrigated areas? (specify wells)	Measurement	Monthly	BISA/WCA	N	N/A	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	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	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	N/A

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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 01	ABISRP 02	ABISRP 03		ABISRP 04
							Lot 1	Lot 2	
Water quantity pumped before rehabilitation/reconstruction?	Flow Measurement	Monthly, average flow	BISA	N	N/A	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	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	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

EIEC: 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 Kharkhur Regulator



Repaired Regulator
28 December 2019



Old Gates will be collected by BISA
28 December 2019

Construction Works at Peresechenie Regulator



Canal Diversion Work Prior to Construction
28 December 2019



Camping Site and Stored Pipes
28 December 2019

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

Kuyu Mazar Working Site



Improved Lightening and Ventilation
Conditions
28 September 2019



Hazardous/Recyclable Solid Waste Storage
Containers
28 September 2019

Kuyu Mazar Working Site



Smoking Staff at the Fuel Storage Area
28 December 2019



Dust Suppression Applied Areas
28 December 2019

Kuyu Mazar Camping Site



Improved Lightening and Ventilation
Conditions
28 December 2019



All kind of Wastes Have Been Stored in
Hazardous/Recyclable Solid Waste Storage
Containers
28 December 2019

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

Kizil Tapa Working Site



Hazardous/Recyclable Solid Waste Storage
Containers
28 September 2019



Construction Waste Storage Area
28 September 2019

Kizil Tepa Working Site



Demolished Concrete Left Around the
Sedimentation Basin
27 December 2019



Lightening Works on the Gates
27 December 2019

Kizil Tepa Working Site



Hazardous/Recyclable Solid Waste Storage
Containers
27 December 2019



Kitchen in Kizil Tepa Working Camp
27 December 2019