Environmental Monitoring Report

Project Number: 47181-003, Grant G0576/0577

Reporting period: January – June 2023

Republic of Tajikistan: Water Resources Management in Pyanj River Basin Project

(Additional Financing)

Prepared by the Project Implementation Group (PIG) for the Agency for Hydrometeorology of the Committee of Environmental Protection under the Government of the Republic of Tajikistan and the Asian Development Bank.

July 2023

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ABBREVIATIONS

ADB	Asian Development Bank
ALRI	Agency for Land Reclamation and Irrigation
CEP	Committee for Environmental Protection under the Government of Tajikistan
CSJC	Closed stock joint company
DRR	Disaster Risk Reduction
DRS	Districts of Republican Subordination
EMP	Environmental Management Plan
GBAO	Gorno-Badakhshan Autonomous Oblast
Hydromet	State Agency for Hydrometeorology
JPRBC	Joint Pyanj River Basin Commission
IEE	Initial Environmental Examination
LLC	Limited Liability Company
MLRWR	Ministry of Land Reclamation and Water Resources
MEWR	Ministry of Energy and Water Resources
O&M	Operation and maintenance
OSJC	Open stock joint company
PIG	Project Implementation group
PIC	Project Implementation company
PPE	Personal Protective Equipment
PRB	Pyanj River Basin
RBMP	River Basin Management Plan
RBO	River Basin Organizations
SAEMR	Semi-Annual Environmental Management Report
SPS	Safeguard Policy Statement
SSEMP	Site Specific Environmental Management Plan
TA	Technical Assistance
TJRM	Tajikistan Resident Mission of ADB
TSP	Total Suspended Particles
WMO	World Meteorology Organization
WRM	Water Resource Management

Units

°C	degree Celsius
cm	centimeter
km	kilometer
km^2	square kilometer
m	meter
m^2	square meter
mg/m^3	milligram per cubic meter
dB	decibel

1 INTRODUCTION

1.1 Preamble

1. This is the sixth semi-annual environmental monitoring report (SAEMR) of the “Water Resources Management in Pyanj River Basin Project (Additional Financing)”.
2. This SAEMR covers the period from January to June 2023 and presents the results of the monitoring of environmental safeguards implementation at construction sites.

1.2 Headline Information

3. The report describes the status of project implementation activities carried out by the Project Implementation Group (PIG) with regards to environmental safeguard issues. During reporting period, works covered Construction of Building No. 5 and 6 Mixed-Use Buildings which started on 25 October 2022.
4. Construction of Building No. 5 and 6 Mixed-Use Buildings was awarded to “Binosoz 2015” LLC. The civil works of Construction of Building No. 5 and 6 Mixed-Use Buildings commenced in October 2022.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 PROJECT DESCRIPTION

5. Tajikistan is a country highly prone to climate-related extreme weather events, notably flooding, which has caused roughly 80% of disaster mortalities in the country in the period 1990-2016.[1] Climate change is expected to exacerbate these adverse events and their impacts. Higher temperatures and changes in precipitation patterns are expected to cause earlier and faster snowmelt and recession of glaciers and a decline in overall water availability. Water stress conditions are likely to become more common, and flooding and landslides are likely to become more frequent and damaging.[2] Climate vulnerability is particularly acute in the districts along the Pyanj River Basin (PRB), the primary tributary to the Amu River in the south of the country, which are among the country's poorest and comprise a wide range of geographical and climatic conditions. The PRB is also vulnerable to climate change. Gradual shift in the river flow seasonal distribution and increase of crop water deliveries requirements in irrigation systems are predicted as climate change impacts.

6. However, insufficient availability of hydrometeorological information[3] and accurate and timely warnings of severe weather and flood[4] is a limiting factor to water resources management in Tajikistan, as well as disaster risk reduction (DRR) and climate resilience more broadly. The responsible agency, the State Agency for Hydrometeorology (Hydromet) has limited forecasting capacity, suffers from poor building infrastructure, a degraded monitoring network, poor staff retention, and insufficient operation and maintenance (O&M) budget.

7. For efficient water resources management (WRM), increase of food security, and reduction of poverty in the PRB, the project will adopt a comprehensive approach to implement appropriate measures at (i) overall basin level; (ii) water supplier level; and (iii) water user level. Additional financing will expand the scope of the original project by supporting Hydromet's development to a sustainable and well-resourced national institution that produces timely and accurate forecasting and warning services. In doing so, the project will address key underlying institutional weaknesses, and thereby develop a strong foundation upon Hydromet may continue to develop.

8. At overall basin level, the project will support the country's ongoing water sector reform. Some required actions to reform water sector have been undertaken by the Government. The Ministry of Land Reclamation and Water Resources (MLRWR) was abolished in November 2013 and its responsibilities were reassigned to the newly formed Ministry of Energy and Water Resources (MEWR) for the policy and regulations on WRM; and to the Agency of Land Reclamation and Irrigation (ALRI), for development and management of WRM infrastructure. Further reforms include (i) the change from administrative to hydrological areas; and (ii) the establishment of (a) river basin management plans (RBMPs) to clarify and monitor water allocations, and (b) water governance institutions such as river basin organizations (RBOs) and river basin councils, in line with principles of integrated WRM. The project will implement reforms in the PRB as highlighted in items (i) and (ii).[5]

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[1] The OFDA/CRED. International Disaster Database. http://emdat.be/emdat_db/.

[2] Punkari et al. 2014. Climate Change and Sustainable Water Management in Central Asia. ADB Central and West Asia Working Paper Series No. 5. Asian Development Bank. Manila.

[3] ADB. 2014. *Technical Assistance to the Republic of Tajikistan for Building Capacity for Climate Resilience. Manila (TA 8090-TAJ). — Climate and Impact Modeling Advisory Group. Climate Change and Impact Modeling Experts' Report.*; World Bank. 2009. *Improving weather, climate and hydrological services delivery in Central Asia.* https://www.gfdrr.org/sites/gfdrr.org/files/Improving_Weather_Climate_HydrologyDelivery_CentralAsia.pdf.

[4] ADB, 2016. Tajikistan: *Agency of Hydrometeorology Transformation – institutional restructuring scenarios report. Consultant's Report*. Manila

[5] MEWR. 2015. Water Sector Reforms Programme for 2016-2025. Dushanbe

9. Given that more than 40% of the PRB covers the territory of Afghanistan and serious flood disasters occurred frequently, both governments of Afghanistan and Tajikistan signed a bilateral agreement for joint hydrological monitoring of Pyanj River in 2010. A road map to establish a joint PRB commission (JPRBC) was drafted in 2013 with ADB's assistance to implement the bilateral agreement. The project will also support required activities to implement the road map through a capacity development delegated technical assistance (TA).
10. The additional financing will comprise four components, which will expand two of the original project's outputs. The project will support the modernization of the new Hydromet headquarters operations center including main office building, ancillary buildings, and two mixed-use buildings.
11. Location of the project in Dushanbe is shown in **Figure 1** below.

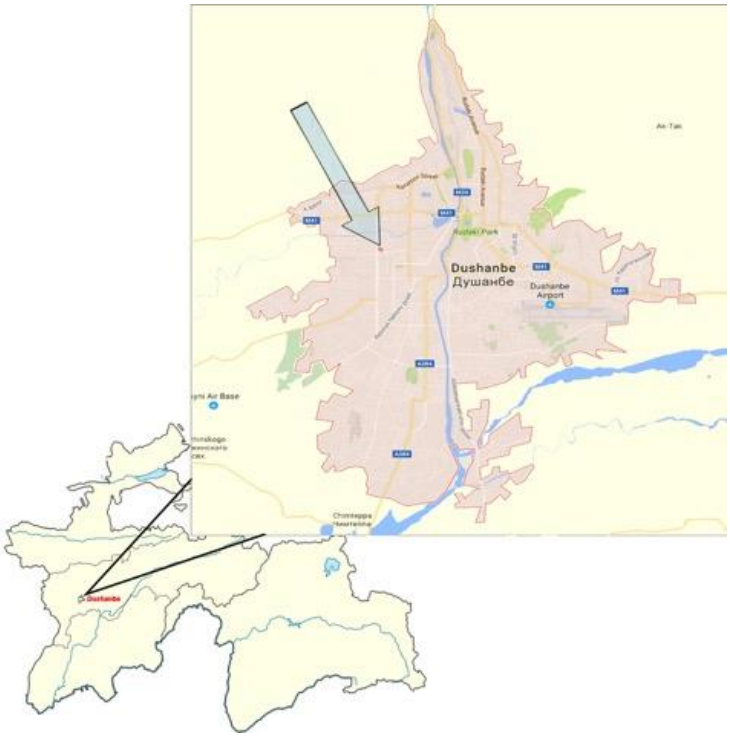

Figure 1: Location of project area

12. The construction site is located in Sino district of Dushanbe city.

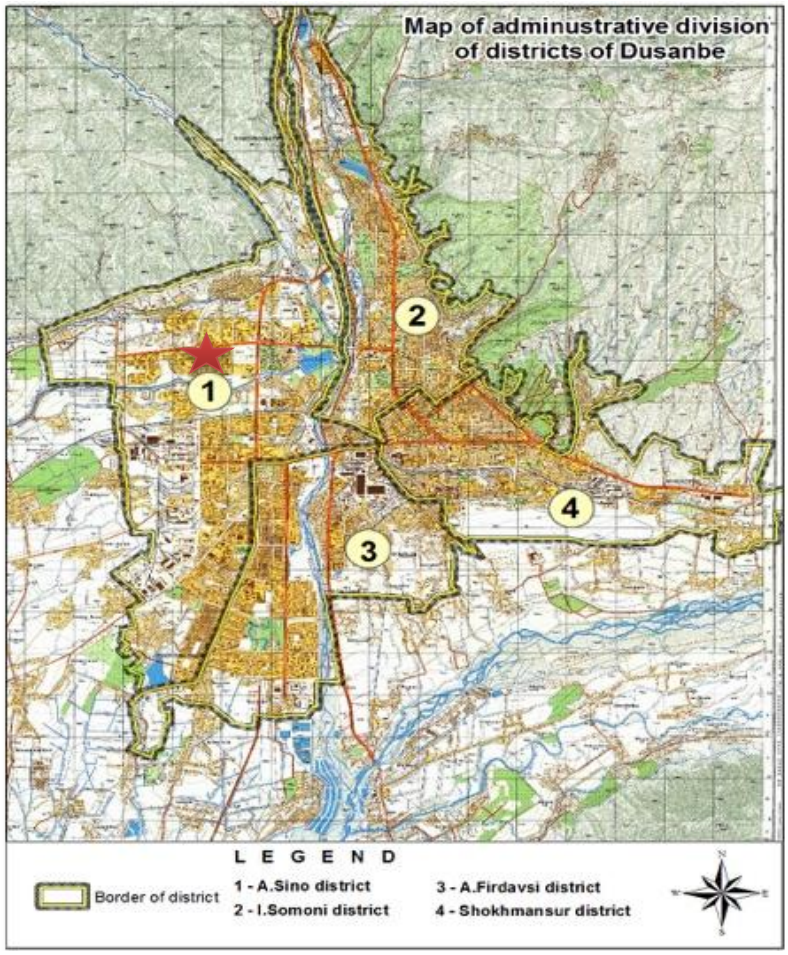

Figure 2: Administration map of Dushanbe city and location of the project (red star)

13. The project will support legal and organizational transformation into a government entity with increased flexibility to seek and retain additional entrepreneurial income to supplement core government support.

14. The modernization of the Hydromet operations center and legal transformation underpins the project's contribution to the World Meteorological Organization (WMO) Strategy for Service Delivery and Global Framework for Climate Services pillars and achievement of the project objective of a sustainable and well-resourced Hydromet.

15. The project will support capacity building to improve forecasting and warning of extreme weather events. The project will develop Hydromet's capacity for flood forecasting and local flood alerts to support improvements in the water resources management and disaster risk reduction in the PRB area. The project will provide flood awareness and preparedness training for local stakeholders. The project will develop and implement of a viable business model for the marketing and sale of fee-based services. A system and platform for the sale of information and forecasting products will be developed, and at least one new weather information product will be marketed among key stakeholders in the PRB to support agricultural production and water resource management.

16. The original and additional financing project is categorized B for environment. ALRI and Hydromet shall ensure that the design, construction, operation and maintenance of project's facilities to be financed under output 2 are carried out in accordance with ADB's Safeguard

Policy Statement (SPS, 2009), the applicable laws and regulations in Tajikistan, and the initial environmental examination (IEE) and its environmental management plan (EMP).

2.2 Project contracts and management

17. A new Project Implementation Group (PIG) has been established in Hydromet on 27 December 2018, which is responsible for (i) implementing project activities in accordance with the project design; (ii) coordinating activities between EAs, stakeholders, and other agencies concerned; (iii) ensuring compliance with environmental and social safeguard requirements; (iv) maintaining appropriate accounts, including reports on withdrawal applications and disbursement; (v) carrying out recruitment of consulting services and procurement activities; (vi) developing asset management and O&M plan to comply with the grant covenant; (vii) monitor, evaluate and report on project progress, and disseminate project progress (e.g., planned and completed project activities including procurement) through Hydromet's or Project's website; and (viii) preparing quarterly progress and other reports in format acceptable to ADB. The PIG and project implementation consultants are primarily based in the current Hydromet building and are expected to use the offices recently renovated under the ongoing ADB technical assistance (TA8090-TAJ). During implementation, the project explores cost- or staff-sharing arrangements with the PIG for the ongoing World Bank project in Hydromet subject to ADB approval.

18. **Board of Directors for Hydromet.** The transformed Hydromet will have a board of directors with composition and responsibilities appropriate to its new legal form and structure. The board is expected to provide oversight and guidance to Hydromet management on strategy and policy. In line with the format of the board: (i) the director of Hydromet will represent Hydromet management as the secretary of the board of directors; (ii) Asian Development Bank will have observer status on the board of directors: such status will allow a previously-agreed designated representative to participate in board meetings and review board meeting minutes, without voting or other decision-making rights; and (iii) World Bank will be invited to join under observer status, and other donor agencies may likewise be invited. The board of directors will meet upon request, and in any event not less that annually, with meeting minutes recorded and published on the Hydromet website. The board of directors may comprise five (5) to seven (7) members chaired by the Deputy Prime Minister, made up of a subset of members of the Project Steering Committee. Additional representatives, such as from Tojik Telekom and Barqi Tojik may be invited to join the board to reflect the range of stakeholders of Hydromet services.

19. The contract between PIG and Project Implementation Consultant (PIC) – international company FCG Finnish Consulting Group jointly with ARPA Consulting LLC was concluded on 5 June 2019 for period of 45 month (till March 2023). The extension of the contract with the PIC is currently under consideration.

20. During reporting period, the tender for construction works on Construction of Building No. 5 and 6 Mixed-Use Buildings were concluded and the construction firms were picked out. The contract on Construction of Building No. 5 and 6 Mixed-Use Buildings has been concluded with LLC Binosoz-2015 on 12 October 2022 for duration of 545 days. The contractor submitted initial version of the SSEMP on 20 October 2022. The SSEMP was checked by NES of PIC and finally approved by the PIG on 25 October 2022 before the commencement of civil works. Civil works were not commenced before the approval of SSEMP of Contractor by PIG.

21. Summary of civil works contracts and works' progress is summarized in Table . All awarded contracts included EMPs cleared by ADB and conditions of national IEE clearance which are listed under the following paragraph.

22. The IEE report covering entire scope of the project was submitted by Hydromet agency to the State Ecological expertise (SEE) of the Committee for Environmental Protection, which issued “environmental appraisal” on 4 September 2020 (Registration No. 1203/15) with following conditions (annex 1):

a) During reconstruction and construction of hydrometeorological agency infrastructure, the requirements of construction rules and norms, sanitary norms (SI) 245-71, state and environmental standards, norms and requirements of legislation of the Republic of Tajikistan in the field of environmental protection and improvement should be strictly observed; and

b) Prior to the commencement of construction works, an environmental protection plan should be prepared and delivered to the competent authorities for approval. Contractor’s Site specific environmental management plan has been prepared and approved by Department of environmental protection of Dushanbe city.

c) Before the start of construction work to coordinate measures for the protection of the environment and 60 competent authorities;

d) Control over observance of the legislation of the Republic of Tajikistan in the field of protection and improvement of environment is assigned to Department of environment protection of the city of Dushanbe.

Besides the solid waste generated during construction, there are no foreseen significant environmental impacts. More information in the Annex 1.

Table 1: Summary of Civil Works Contracts and works' progress

Package/ Lot	Scope	Contractor	Signed	Approval Date			Environmental personnel		Civil Work			Progress as of	
				SSEMP	HSMP	ERP	Environmental officer	Health and Safety officer	Start	End	DLP	01 Jan 2023	01 Jul 2023
1	Construction of the Hydromet main office and building auxiliary buildings	Joint venture LLC "KHURAMSHAHR-2015" and JSC INSHAAT	22 Dec 2020	22 Jan 2021	22 Jan 2021	22 Jan 2021	Khakika Surieva	Khakrizo Saidov	Jan 2021	June 2022	complied	100%	100%
2	Construction of Building No. 5 and 6 Mixed-Use Buildings	LLC "Binosoz 2015"	12 Oct 2022	25 Oct 2022	25 Oct 2022	25 Oct 2022	Abdurahim Talbakov	Sherali Rakhmonov	Nov 2022	(May 2024)	Not yet started (365 days)	3.1%	18%

Note: The Month/Years in brackets are planned schedule.
DLP = defects liability period, ERP = Emergency Response Plan, HSMP = Health and Safety Management Plan, SSEMP = site-specific environmental management plan

2.2.1. Project environmental management

23. The PIG under Hydromet hired Environmental Specialist Mr. Sharifjon Rajabov on 20 April 2020. The main responsibilities of PIG Environmental specialist includes following[6]: (i) ensure that EMP will be updated during detailed design completed; (ii) review and update IEE as required; (iii) ensure that bidding documents include all requirement to implement IEE and its EMP; (iv) ensure that the bidder selected will have adequate resources to implement and update EMP; (v) undertake environmental safeguards monitoring activities and prepare environmental safeguard reports to be submitted to ADB; and (vi) ensure that the any works are implemented in accordance with ADB SPS 2009 as well as the government law and regulation related to environment.

24. The PIG is supported by the international company FCG Finnish Consulting Group jointly with ARPA Consulting LLC team which includes one international environmental consultant – Pasi Vahanne and one national environmental consultant – Dilshod Dadobaev. In connection with the completion of the contract of Dilshod Dadabaev in March 2023, Homidov Anvar was approved for the position of an environmental specialist in mid-June. The contract with international environmental consultant Pasi Vahanne has been extended until March 2024.

Table 2: Project's environmental, health and safety (EHS) personnel

Environmental Personnel	Allocated PMs	Date of assignment (From-To)	Name
Environmental Specialist of PIG	part time	20 April 2020 – Jan-2024	Sharifjon Rajabov
International Environmental Specialist (Finnish Consulting Group)	2 Person months	1 December 2021 – March 2024	Pasi Vahanne
National Environmental Consultant	6 person months + 45 days	01 June 2020 – March 2023	Dilshod Dadobaev
National Environmental Consultant	60 days	July 2023 – March 2024	Anvar Homidov

25. Project Organization Structure and environmental team are shown in Figure 3 below.

[6] Project Administration manual, Water resources Management in Pyanj river basin project, 2019

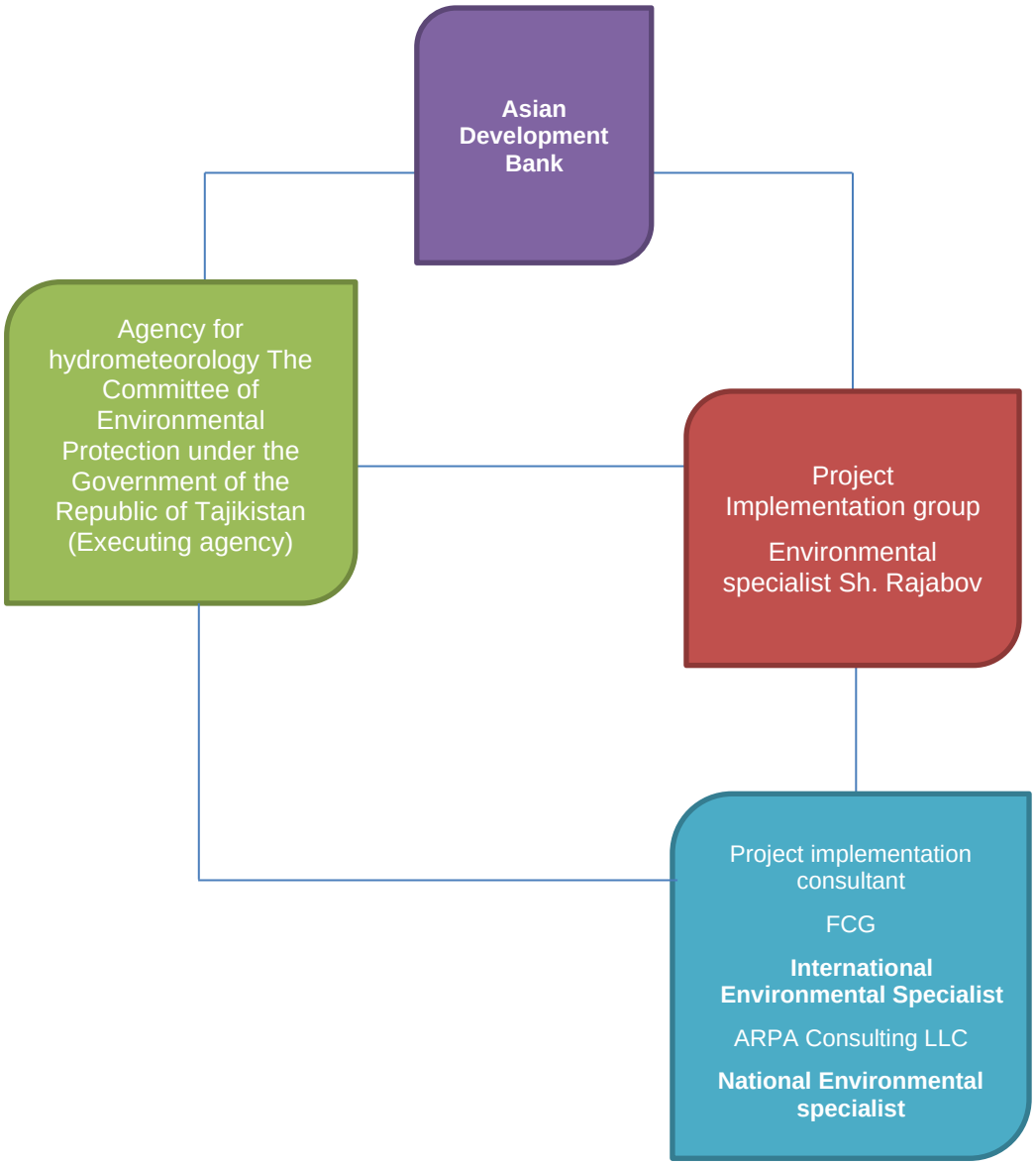

Figure 3: Project organizational structure and environmental management

2.3 Construction activities and project progress in reporting period

26. During the reporting period, construction work on the Construction of Buildings No. 5 and 6 Mixed-Use Buildings started. Commencement date of the construction works is 25 October 2022. The contractor completed the biting of the basement and began construction of the first and second floors of buildings No. 5 of the Mixed-Use Building and began construction of the first floor No. 6 of the Mixed-Use Building. The total progress of the work is calculated as 18%.

Table 3: Construction activities conducted of buildings No. 5

No.	Name	Unit	Quantity
Section 1. Columns			
1	The device of reinforced concrete columns in a wooden formwork	100 m^3	0.3236
2	Armature A3	t	5.54
3	Armature A1	t	0.236
4	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 20-36 mm	1 t	2.372
5	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18 mm	1 t	2.5344
6	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.89733
Section 2 Stiffness Diaphragm			
J-1 and J-2 horizon 30cm			
7	Concreting of external wall structures with a concrete pump truck	10 m^2 – structures	9.954
8	Concrete M-350 (338.84 * 1.015)	m^3	28.6602
9	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^2 – structures	9.954
10	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*1194.48*2*1.2		0.08333
11	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t fittings, mortgages details	5.1527
12	Armature A3	t	5.0521
13	Armature A1	t	0.1006
14	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.1006

15	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18 mm	1 t	5.0521
J-5 30 cm			
16	Concreting of external wall structures with a concrete pump truck	10 m^2 – structures	0.8695
17	Concrete M-350 (32.13*1.015)	m^3	2.71766
18	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^2 – structures	0.8695
19	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*88.83*2*1.2		0.08333
20	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t fittings, mortgages details	0.3815
21	Armature A3	t	0.372
22	Armature A1	t	0.00951
23	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.00951
24	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	0.3337
25	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 20-36 mm	1 t	0.0383
J-3 30 cm SD-3 30 cm			
26	Concreting of interior wall structures with a concrete pump truck	10 m2 – structures	2.2605
27	Concrete M-350 (74.86*1.015) 74.86	m^3	6.3319
28	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^2 – structures	2.2605
29	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*271.26*2*1.2		0.08333
30	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t fittings, mortgages details	0.6655
31	Armature A3	t	0.6425
32	Armature A1	t	0.02297

33	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.02297
34	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	0.6425
J-4 30 mm			
35	Concreting of interior wall structures with a concrete pump truck	10 m2 – structures	3.848
36	Concrete M-350 (106.92*1.015) 106.86	m^3	9.0385
37	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow .; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^2 – structures	3.848
38	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*461.76*2*1.2		0.08333
39	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t	1.5265
40	Armature A3	t	1.49313
41	Armature A1	t	0.033385
42	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	1.49313
43	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.03385
J-6 and J-7 30 mm			
44	Concreting of interior wall structures with a concrete pump truck	10 m^2 – structures	4.033
45	Concrete M-350 (101.82 * 1.015)	m^3	8.6122
46	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^3 structures	4.033
47	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*472.86*2*1,		0.08333
48	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t	1.36605
49	Armature A3	t	1.3314
50	Armature A1	t	0.03466
51	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	1.3314

52	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.033466
J-8 mm			
53	Concreting of interior wall structures with a concrete pump truck	10 m^2 – structures	1.258
54	Concrete M-350 (35.2*1.015)	m^3	2.977
55	Installation and dismantling of: large-panel wall formwork *(OZP=0.89; EM=0.8 to flow .; ZPM=0.8; TZ=0.89; TZM=0.8)*	10 m^2 – structures	1.33
56	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*150.96*2*1.2		0.08333
57	Installation of frames and grids in the walls *(OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)*	1 t fittings, mortgages	0.53713
58	Armature A3	t	0.5232

Table 4: Construction activities conducted of buildings No. 6

No.	Name	Unit	Quantity
Section 1. Columns			
1	The device of reinforced concrete columns in a wooden formwork	100 m^3	0.4236
2	Armature A3	t	5.54
3	Armature A1	t	0.236
4	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 20-36 mm	1 t	2.372
5	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18 mm	1 t	2.5344
6	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.89733
Section 2 Stiffness Diaphragm			
J-1 and J-2 horizon 30cm			

7	Concreting of external wall structures with a concrete pump truck	10 m^2 - structures	9.954
8	Concrete M-350 (338.84 * 1.015)	m^3	28.6602
9	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^2 - structures	9.954
10	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*1194.48*2*1.2		0.08333
11	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t fittings, mortgages details	5.1527
12	Armature A3	t	5.0521
13	Armature A1	t	0.1006
14	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.1006
15	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18 mm	1 t	5.0521
J-5 30 cm			
16	Concreting of external wall structures with a concrete pump truck	10 m^2 - structures	0.8695
17	Concrete M-350 (32.13*1.015)	m^3	2.71766
18	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow .; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^2 - structures	0.8695
19	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*88.83*2*1.2		0.08333
20	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t fittings, mortgages details	0.3815
21	Armature A3	t	0.372
22	Armature A1	t	0.00951
23	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.00951
24	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	0.3337
25	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 20-36 mm	1 t	0.0383

J-3 30 cm			
26	Concreting of interior wall structures with a concrete pump truck	10 m^2 - structures	2.2605
27	Concrete M-350 (74.86*1.015) 74.86	m^3	6.3319
28	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^2 - structures	2.2605
29	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*271.26*2*1.2		0.08333
30	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t fittings, mortgages details	0.6655
31	Armature A3	t	0.6425
32	Armature A1	t	0.02297
33	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.02297
34	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	0.6425
J-4 30 mm			
35	Concreting of interior wall structures with a concrete pump truck	10 m^2 - structures	3.848
36	Concrete M-350 (106.92*1.015) 106.86	m^3	9.0385
37	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^2 - structures	3.848
38	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*461.76*2*1.2		0.08333
39	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t	1.5265
40	Armature A3	t	1.49313
41	Armature A1	t	0.033385
42	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	1.49313
43	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.03385
J-6 and J-7 30 mm			

44	Concreting of interior wall structures with a concrete pump truck	10 m^2 - structures	4.033
45	Concrete M-350 (101.82 * 1.015)	m^3	8.6122
46	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^3 structures	4.033
47	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*472.86*2*1,		0.08333
48	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t	1.36605
49	Armature A3	t	1.3314
50	Armature A1	t	0.03466
51	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	1.3314
52	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.033466
J-8 mm			
53	Concreting of interior wall structures with a concrete pump truck	10 m^2 - structures	1.258
54	Concrete M-350 (35.2*1.015)	m^3	2.977
55	Installation and dismantling of: large-panel wall formwork (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	10 m^2 - structures	1.33
56	Depreciation charge for formwork and supporting metal elements (1*89.530+0.2*16417120)*150.96*2*1.2		0.08333
57	Installation of frames and grids in the walls (OZP=0.89; EM=0.8 to flow.; ZPM=0.8; TZ=0.89; TZM=0.8)	1 t fittings, mortgages details	0.53713
58	Armature A3	t	0.5232
59	Armature A1	t	0.014
60	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 12-18mm	1 t	0.5232
61	Surcharge for the manufacture of meshes (frames) from reinforcement with a diameter of 6-10 mm	1 t	0.014

27. Construction works and implementation of SSEMP are presented in photos 1-4 below.

Photo 1. Site of Construction of Building No. 5-6, October 2022

Photo 2. Basement construction progress building 5, December 2022

Photo 3. Construction progress of Building No. 5, April 2023

Photo 4. Construction progress of Buildings No. 5 - 6, June 2023

Photo 5: Ingress of concrete mix to the site. May 2023

2.4 Changes in project design

28. No changes in project design were done in the reporting period.

2.5 Description of Any Changes to Agreed Construction methods

29. No changes of construction methods were done in the reporting period.

3 ENVIRONMENTAL MANAGEMENT

3.1 General Description of Environmental Safeguard Activities

30. The PIG in conjunction with PIC are responsible to carry out day-to-day management of project execution. The PIG and PIC includes an Environmental and Social Safety specialist and Environmental and Social Safety Consultant who executed management of all environmental and social aspects of the project.

31. Environmental Safeguards team will conduct regular supervising of the construction works regarding implementation of environmental safeguards requirements and, in particular, for supervising and reporting on the Contractor's performance in the implementation of the EMP/SSEMP.

32. Activities carried out by international and national consultant during the monitoring period are provided in Table 3 below.

Table 5: Environmental Safeguards Activities Carried out During Reporting Period (January-June 2023)

Environmental Safeguard Activities
PIG's environmental specialist (Sharifjon Rajabov) - Ensured interaction with government agencies and organizations - Conducted site visits, to audit of implementation of SSEMP and EMP - Audit the corrective actions are implemented by the deadline.
PIC's international environmental expert (Pasi Vahanne) (contract extended until March 2024) - Review Semiannual Environmental Monitoring report
PIC's national environmental expert (Dilshod Dadobaev) (until March 2023) - Site visits to audit of implementation of SSEMP and EMP - Review site specific environmental management plan of contractor
PIC's national environmental expert (Anvar Homidov) (July 2023 till March 2024) - Site visits to audit of implementation of SSEMP and EMP - Review site specific environmental management plan of contractor - Preparation of Semiannual Environmental Monitoring Report

3.2 Site inspections

33. The overall objective of the inspections is to ensure good environmental practice in project operations and enable PIG to establish good governance and efficient environmental management of day-to-day activities. Site inspections and audits in the reporting period are shown in Table 6 below.

Table 6: Site visits and audits in the reporting period

№	Date	Object	Auditors	Purpose of Audit	Summary of any Findings
1	11.01.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	Dadobaev D. ARPA Consulting. Environmental Consultant	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Information boards have not been installed and warning signs have been partially installed in areas where work is being carried out.
2	07.02.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	Dadobaev D. ARPA Consulting. Environmental Consultant	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Information boards have not been installed and warning signs have been partially installed in areas where work is being carried out. • All workers are provided with PPE, but some workers do not use them
3	03.03.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	Dadobaev D. ARPA Consulting. Environmental Consultant	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Solid Waste Containers Installed
4	14.03.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	Dadobaev D. ARPA Consulting. Environmental Consultant	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Information boards and warning signs have been installed at the construction site
5	13.04.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	• Workers are provided with personal protective equipment, but they do not use it. • Construction site cleared of debris • No containers for liquid waste • First aid supplies are in place but should be supplemented. • A briefing on occupational health and safety for workers was provided. • The complaint log is on site at the Contractor's office. • Organized sanitary and hygienic facilities for workers. • COVID-19 prevention tools in place

6	20.04.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Building materials scattered around the construction site
7	04.05.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	During concrete work, there are cases when the concrete mixture gets on the site for other purposes
8	19.05.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Building materials scattered around the construction site
9	08.06.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	During concrete work, there are cases when the concrete mass spreads outside the molds
10	26.06.2023	Construction of the Building No. 5 and 6 Mixed-Use Buildings	PIG Environmental specialist	Monitoring of the fulfilment of the requirements of the SSEMP during construction works	Dust formations are observed.

3.3 Issues Tracking (Based on Non-Conformance Notices)

34. During the reporting period (1 January 2023 - 30 June 2023), two non-conformances have been recorded. The Implementation Status of Corrective Actions proposed in the previous environmental monitoring report is shown below (Table 7).

Table 7: ***Implementation Status of Corrective Actions proposed in the previous environmental monitoring report (July-December 2022)***

No.	Issue	*Required Action*	*Responsibility*	*Timing (Target Dates)*	*Description of Resolution and Timing (Actual)*	*If not yet resolved, indicate the reason why and specify further required action and timeframe.*
Identified during current monitoring period						
1	Excavated foundation pit is not fenced	Install fences around the foundation pit	Contractor for Construction of Building No. 5 and 6 Mixed-Use Buildings	**20 January 2023**	Done Measures were taken by the contractor (photo No. 2 December 2022)	
2	Some workers' PPE does not correspond to the season	Provide all workers with seasonal PPE, including footwear	Contractor for Construction of Building No. 5 and 6 Mixed-Use Buildings	**20 January 2023**	Done Workers are provided with seasonal PPE	

3.4 Unanticipated Environmental Impacts or Risks

35. During the reporting period, COVID-19 is viewed as an unanticipated impact and risk to the community and workers. There were no major delays during the monitoring period due to the COVID-19 situation. No cases of COVID-19 among workers were reported during the monitoring period.
36. The Contractor developed Occupational Health and Safety Plan as part of its SSEMP which includes, inter alia, corresponding measures on prevention of the spread of COVID-19. The Contractor's SSEMP also includes Emergency Management Plan.
37. Contractors' personnel wear mask, gloves, helmets and working wear, but not all the time. PIC advised the Contractor to monitor its workers on wearing the full set of PPE. Due to the absence of an epidemic, wearing masks is not mandatory.

3.5 Trends

38. Trends will be followed in terms of issues encountered and solved as well as specific trends encountered. The following table shows the number of issues identified in each period and the per cent closed at the end of the reporting period. For previous SAEMRs this is based on the corrective action plan in each report.

Table 8: Trends in issues during Semi Annual Reports

SAEMR Number and period	No of issues	No of issues Closed	% of issues Closed
1. January-June 2023	2	2	100%

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

39. Contractor concluded contract with Centre for Analytical control of Committee of Environmental Protection under the Government of the Republic of Tajikistan. Contractor has conducted the site-specific instrumental measurement of air quality and noise levels. Environmental monitoring is overseen by the approved EMPs, IEEs and EIAs, environmental standards and other environmental commitments.
40. The sampling and measurement locations were selected based on the land use and vulnerable activities in the surrounding area (e.g. residents).

Photo 6. Air quality and noise measurement points

4.1.1 Water quality monitoring

41. No instrumental measurements of water quality are foreseen for this Project as per IEE/EMP. The Project does not impact water bodies as all works will be implemented at the relevant distance from water sources and inside the fenced area of rehabilitated institution's buildings, which form the existing infrastructure.

4.1.2 Air quality monitoring

42. During this period, instrumental measurements were recorded monthly at the three (3) sensitive areas of the construction sites. Monitoring results of Air quality in the Project impact zone are within the Tajikistan environmental standard.

Table 9: Air quality measurement results

Parameters		TSP	CO	NO_X	NO	SO_2	CH_2OH	HCOH
National Standard (MPC) mg/m³		0,15	5	0,085	0,04	0,05	0,003	0,003
Side of the highway	***Baseline values***	***0,06***	***2,9***	***0,009***	***0,006***	***0,008***	***0,001***	***0,001***
	01/2023	0.11	1.07	0.012	0.005	0.03	0.0004	0.0003
	02/2023	0.9	2.03	0.017	0.005	0.03	0.0002	0.0002
	03/2023	0.11	2.07	0.006	0.007	0.02	0.0006	0.002
	04/2023	0.11	1.07	0.012	0.005	0.03	0.0004	0.0003
	05/2023	0.8	1.98	0.010	0.005	0.04	0.0003	0.0003
	06/2023	0.9	2.03	0.017	0.005	0.03	0.0002	0.0002
Side of the railroad	**Baseline values**	0,05	2,8	0,007	0,005	0,009	0,001	0,001
	01/2023	0.11	2.03	0.010	0.003	0.02	0.0003	0.002
	02/2023	0.9	1.13	0.09	0.004	0.03	0.0002	0.001
	03/2023	0.10	2.00	0.007	0.005	0.03	0.0005	0.003
	04/2023	0.11	2.0 3	0.010	0.003	0.02	0.0003	0.00 2
	05/2023	0.8	1.23	0.010	0.004	0.03	0.0004	0.00 2
	06/2023	0.9	1.13	0.09	0.004	0.03	0.0002	0.001
Near a residential building	**Baseline values**	0,07	2,7	0,006	0,007	0,005	0,002	0,001
	01/2023	0.12	2.00	0.009	0.0004	0.02	0.0006	0.0002
	02/2023	0.8	1.14	0.007	0.006	0.01	0.0003	0.0003
	03/2023	0.13	1.98	0.003	0.003	0.01	0.0009	0.002
	04/2023	0.12	2.00	0.009	0.0004	0.02	0.0006	0.0002
	05/2023	0.10	1.00	0.009	0.006	0.02	0.0006	0.0002
	06/2023	0.8	1.14	0.007	0.006	0.01	0.0003	0.0003

43. The concentration of harmful substances in the ambient air at all points in the Project's area of influence is below the permissible limits (MPC). During the entire construction period, regular dust suppression was also carried out. There were no complaints from the population.

44. References, on the basis of which the work was carried out, and all calculations were performed as per following:

- "Collection of methods for determining the concentrations of pollutants in industrial emissions", Leningrad, Gidrometioizdat, 1987.
- Instruction on the procedure for the preparation and conduct of state control of organized emissions of harmful substances into the atmosphere at industrial enterprises." Ministry of Environmental Protection of the Republic of Tajikistan, - Dushanbe - 1993.

45. The concentration of pollutants at the control points that characterize the impact of the object on the environment was carried out by the Express method of the gas analyzer "GANK-4".

4.1.3 Noise monitoring

46. During this period, instrumental measurements were recorded monthly at the three (3) sensitive areas of the construction sites. Monitoring results of noise level measurements in the Project impact zone are within the Tajikistan environmental standard.

Table 10: Noise Measurement Results

#	Location of measurement	Noise standards in dB		*Baseline values*	Q1	Q2
		07:00-23:00	23:00-06:40			
1	Highway side	75	75	***56,2***	70.7	68.2
2	Railwayline side	75	75	***57,3***	71.8	67,8
3	Residental area	55	45	***50,6***	51,6	47,9

47. The noise level in the Project's area of influence in the period from January to June 2023 did not exceed acceptable standards. Work is carried out in a limited period of time – from 7:00 to 22:00. No complaints were received from the population.

48. Noise measurements are carried out by the sound meter "TEST-815".

4.1.4. Flora and fauna monitoring

49. Monitoring of fauna is not foreseen for this Project according to IEE/EMP. All works were implemented within the fenced area of project in Dushanbe city. The construction materials are stored within the facility. Concrete work is currently underway, concrete is being delivered ready-made, there is very little waste at present on construction site. Dust is generated during transportation but in excessive quantities. There are metal containers for storing building materials. Sanitary premises (toilet, shower) are available for workers, a water supply and sewerage system is available. There is a container for hazardous solid waste, but there is no container for hazardous liquid waste.

4.2 Summary of Monitoring Outcomes

50. Status of compliance with environmental safeguards related covenants in the Project's Grant Agreement signed between Republic of Tajikistan and ADB on 3 August 2018[7] is summarized in 10 below.

[7] ADB. Grant Agreement (Externally financed) for Water resources Management in Pyanj River Basin Project -Additional financing (3 Aug 2018). https://www.adb.org/sites/default/files/project-documents/47181/47181-003-grj-en_0.pdf

Table 11: Grant Agreement Compliance Status

Schedule	Paragraph	Covenant	Compliance Status
3	7 (a)	Condition for Award of Contracts The Recipient shall not award any Works contract which involves environmental impacts until CEP has granted the final approval of the IEE.	**Complied** The Committee for Environmental Protection issued SEE "environmental appraisal" on 4 September 2020 (Registration No. 1203/15)
3	7 (b)	Condition for Award of Contracts The Recipient shall not award any Works contract which involves environmental impacts until the Recipient has incorporated the relevant provisions from the EMP into the Works contract.	**Complied** All contracts include EMPs cleared by ADB and conditions of national IEE clearance which are listed under para. 22
4	2 (a)	Environment The Recipient shall ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with all applicable laws and regulations of the Borrower relating to environment,	**Complied, Ongoing.** All applicable laws and regulations of the Republic of Tajikistan are applied.
4	2 (b)	Environment The Recipient shall ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with the Environmental Safeguards.	**Complied, Ongoing** The Client has provided preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities, which corresponds to environmental safeguards;
4	2 (c)	Environment The Recipient shall ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with all measures and requirements set forth in the IEE, the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	**Complied, Ongoing** 1 of 1 corrective actions proposed in the previous SAEMR has been fully implemented (**Error! R eference source not found.**6).
4	4	Human and Financial Resources to Implement Safeguards Requirements The Recipient shall make available necessary budgetary and human resources to fully implement the EMP.	**Complied.** Personnel involved for EHS reflected in table 2 and figure 3.

Schedule	Paragraph	Covenant	Compliance Status
4	5 (a)	Safeguards – Related Provisions in Bidding Documents and Works Contracts The Recipient shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to comply with the measures relevant to the contractor set forth In the IEE and the EMP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report	**Complied** All contracts include EMPs cleared by ADB and conditions of national IEE clearance which are listed under para. 22
4	5 (b)	Safeguards – Related Provisions in Bidding Documents and Works Contracts The Recipient shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to make available a budget for all such environmental and social measures	**Complied** The recipient makes available the budget for environmental measures whenever required.
4	5 (c)	Safeguards – Related Provisions in Bidding Documents and Works Contracts The Recipient shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to provide the Recipient with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE and the EMP.	**Complied** All safeguard documents included to the bidding documents
4	6 (a)	Safeguards Monitoring and Reporting The Recipient shall submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission	**Complied, Ongoing**. Semiannual Environmental Monitoring Report has been prepared and disclosed at ADBs website regularly. The previous SAEMR (July-December 2022) was disclosed at ADB website[8] and Hydromet agency website in Russian.[9]

[8] https://www.adb.org/projects/documents/taj-47181-003-emr-3
[9] https://meteo.tj/en/agency/documents

Schedule	Paragraph	Covenant	Compliance Status
4	6 (b)	Safeguards Monitoring and Reporting The Recipient shall if any unanticipated environmental and/or social risks and Impacts arise during construction, Implementation or operation of the Project that were not considered in the IEE and the EMP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan;	**Complied, ongoing** COVID-19 is considered as unanticipated risks and impacts. COVID-19 HSMP was prepared and has been implemented. No workers of the Project are identified to be infected by COVID-19 so far.
4	6 (c)	Safeguards Monitoring and Reporting The Recipient shall report any actual or potential breach of compliance with the measures and requirements set forth in the EMP promptly after becoming aware of the breach.	**Complied.** During the project implementation period no actual or potential breach of that compliance with the measures and requirements set forth in the EMP has been observed.
4	8(a)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Recipient's applicable labor law and regulations arid incorporate applicable workplace occupational safety norms;	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Recipient's applicable labor law and regulations arid incorporate applicable workplace occupational safety norms;
4	8(b)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (b) do not use child labor;	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (b) do not use child labor;

Schedule	Paragraph	Covenant	Compliance Status
4	8(c)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (c) do not discriminate workers in respect of employment and occupation;	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (c) do not discriminate workers in respect of employment and occupation;
4	8(d)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (d) do not use forced labor;	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (d) do not use forced labor;
4	8(e)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (e) allow freedom erf association and effectively recognize the right to Collective bargaining; and	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (e) allow freedom erf association and effectively recognize the right to Collective bargaining

Schedule	Paragraph	Covenant	Compliance Status
4	8(f)	*Labor Standards, Health and Safety* The Recipient shall ensure that the core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient shall include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, Including HlV/AIDS to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	**Complied** The core labor standards and the Recipient's applicable laws and regulations are compiled with during Project implementation. The Recipient included specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, Including HlV/AIDS to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.

51. Status of compliance with the Project EMP attached to the disclosed updated IEE is summarized in Tables 10, 11 and 12.

Table 12: Implementation Status of EMP during the construction period - Package 2 (Jan- June 2023)

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Notification and Worker Safety	The local construction and environment inspectorates and communities have been notified of upcoming activities	Yes		
	The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)	Yes		
	All legally required permits have been acquired for construction and/or rehabilitation	Yes		
	All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.	Yes		
	Workers will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)	Yes		
	Appropriate signposting of the sites will inform workers of key rules and regulations to follow.	Yes		
	Emergency Response Plan	Yes		
	Health and Safety Plan	Yes		
	COVID-19 pandemic management plan	Yes		
Noise and Vibration	Construction works will be limited to restricted times agreed to in the permit	Yes		
	Timely public announcements of works	Yes		
	Providing the construction workers with suitable personal protective equipment	Yes		
Air quality, Dust, and emissions of Volatile Organic Compounds and thinners	Construction works will be limited to restricted times	Yes		
	Timely public announcements of works	Yes		
	Providing the construction workers with suitable personal protective equipment (respirators)	Yes		

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	There will be no open burning of construction / waste material at the site	Yes		
	There will be no excessive idling of construction vehicles at sites	Yes		
	Keep surrounding environment (sidewalks, roads) free of debris to minimize dust	Yes		
Construction waste	Timely disposal of construction waste	Yes		
	Dispose of waste appropriately to prevent pollution of soil and groundwater	Yes		
	Do not allow any burning or burying of waste on site.	Yes		
	Prevent littering by construction staff at work sites by providing bins or waste bags in sufficient locations	Yes		
	Aim to minimize waste through reducing and re-using (packaging) material.	Yes		
Asbestos containing materials (ACM)	ACM will not be used as a new material in construction works of new buildings.	Yes		
Toxic / hazardous waste management	Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties, and handling information	Yes		
	The containers of hazardous substances should be placed in a leak-proof container to prevent spillage and leaching	Yes		
	The wastes are transported by specially licensed carriers and disposed in a licensed facility.	Yes		
	Paints with toxic ingredients or solvents or lead-based paints will not be used	Yes		
Water quality	The site will establish appropriate erosion and sediment control measures such as e.g., hay bales and / or silt	Yes		

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams			
Wastewater treatment	The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities	Yes		
	Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment.	Yes		
	Monitoring of new wastewater systems (before/after) will be carried out	Yes		
Direct or indirect hazards to workers	Contractor and its subcontractors shall provide full set of personal protective equipment (PPE) to each worker upon employment, train each worker on use prior to start of assigned task, regularly check conditions of the PPEs, and issue replacement if required. Contractor to maintain record of PPE issuance, trainings conducted, inventory, and replacement.	Partial	Workers are not provided with seasonal PPE	The Contractor has been instructed to take measures to ensure that workers provided seasonal PPE. By June 2023
	The PPEs shall conform with internationally accepted standards and specifications. Each worker/laborer/employee shall be provided with the following PPEs commensurate to the assigned tasks/activities: head protection, eye and face protection, footwear, protective clothing, hand protection, safety harness, fall protection, respiratory equipment, hearing conservation.	Yes		
	Contractor shall not allow employee/worker/laborer to work on-site if PPEs are absent, incomplete or not in accordance with the approved Health and Safety Plan and without written instructions from the EHS supervisor.	Partial	Worker provided and wear PPE, however, PPE is not appropriate for the season	The Contractor has been instructed to take measures to ensure that workers provided seasonal PPE. By June 2023

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	The employee/worker/laborer have the right to refuse work if imminent danger situation exists in the workplace that may result to death or illness.	Yes		
Direct or indirect hazards to public traffic and pedestrians by construction activities	Signposting, warning signs, barriers and traffic diversions, site will be clearly visible, and the public warned of all potential hazards	Yes		
	Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.	Yes		
	Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement	Yes		
	Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.	Yes		
	Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.	Yes		

Table 13: Implementation Status of EMP during the operation period - Package 1 (January-July 2023)

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Environmental impacts related to the sewage system, electrical safety, emergency system etc.	Ensure that administration of Hydromet campus continue to maintain properly in accordance with standards project buildings and facilities.	Yes		

a. Material Resources Utilization

52. By the end of June 2023, the Contractor used in total 37,319 kW of electricity and 499 m^3 water for the construction needs.

4.4. Waste management

53. Constructions works promote to generation of different type wastes starting from garbage, recycle waste, household waste and construction and demolition debris. Waste Management Plan was developed by Contractors and approved by PIG.

54. Construction waste are accumulated on construction site in special isolated areas divided by hazardous, domestic and construction waste. Construction Company signed contracts with the companies for waste removal. The waste is being removed from construction by authorized personnel only in accordance with the safety regulations and disposed at Chorbog landfill (Northern part of Dushanbe, landfill for the construction waste). The quantity of generated waste is presented in Table .

Table 14: Waste generation in the reporting period

No	Name	Unit	Number
1	Removal of construction waste in January 2023	tons	1636.25
2	Removal of construction waste in February 2023	tons	2458.38
3	Removal of construction waste in March 2023	tons	3996.92
4	Removal of construction waste in April 2023	tons	1714.63
5	Removal of construction waste in May 2023	tons	1328.72
6	Removal of construction waste in June 2023	tons	652.32
	Total	tons	11787.22

4.5 Health and Safety

55. The Health and Safety Plan was submitted by the Contractor and approved by the PIC. The Contractor took all precautions at all construction sites for health and safety of the workers and the people of the surroundings in accordance with the Health and Safety Plan submitted by the Contractor and approved by the PIG. Health and Safety measures were continuously applied at all construction sites by the health and safety managers of the Contractor and checked by the Environmental and social safeguards staff of the PIG.

4.5.1. Community health and safety

56. The territory of the construction sites is mostly fenced, appropriate informational and warning signs are installed. During reporting period no incidents occurred and lead to community health and safety issues, including the traffic accidents.

Photo 7: Informational board and warning signs installed, December 2022

Photo 8: Fire shield, garbage container, first aid kit and safety information board, January 2023

4.5.2. Workers' health and safety

57. The Contractor assumed the following obligations:

- ensure safety control at the construction site;

- to prevent the formation of dust, carry out constant spraying of the site with water.

58. No separate construction camp is established for the project because all workers are local. No incidents/accidents, or COVID-19 infection cases occurred during the reporting period.

4.6. Training

59. On the part of the construction supervision company's safety assurance specialists, training was held for Hydromet, PIU, and contractor employees on ADB safeguards requirements. The training discussed issues such as waste management, environmental quality measurement, warehouse and stockpiles management, and grievance redress mechanism.

Photo 9: Training, November 2022

Photo 10: Training, November 2022

4.7. GRM functioning

60. Complaints log books are available at site and district authority building. No complaints received within January-June 2023 from the local responds.

5. SUMMARY AND RECOMMENDATIONS

5.1. Summary

61. All issues pending from previous monitoring period have been resolved. Contractor for the Construction of Building No. 5 and 6 Mixed-Use Buildings was awarded to “Binosoz 2015” LLC. The civil works on Construction of Building No. 5 and 6 Mixed-Use Buildings commenced in October 2022. During reporting period, no complaints were registered.

5.2. Recommendations

62. The PIG should oversee the Grievance Redress Mechanism (GRM) and ensure that complaint registers are available at construction sites. To facilitate communication and cooperation, the PIG should establish closer ties with consultants, contractors, the Team Leader, and Environmental Protection Specialist through email and other online platforms.

63. If civil works need to be carried out outside of scheduled hours or days due to construction delays or other reasons, the PIG, contractor, and local consultants should hold consultation meetings with interested parties, local residents, and other stakeholders to explain and agree on the reasons for the change. Construction methods should be limited to those that generate minimal noise, vibrations, and pollutants.

64. Contractor should conduct monthly instrumental measurements of noise and air quality to ensure compliance with regulations.

65. During the period of construction work, prevent spillage of the concrete mixture, and in the event of a spillage of the concrete mixture, eliminate the shortcomings in a timely manner and prevent spread over the construction site.

66. Install a container for liquid waste.

67. Ensure the order of laying building materials

68. In the dry period of the year, spray the construction site and territory with water and prevent the formation of dust.

Annex I: Conclusion of The State ecological expertise of CEP for updated IEE

КУМИТАИ ҲИФЗИ МУҲИТИ ЗИСТИ
НАЗДИ ҲУКУМАТИ ҶУМҲУРИИ ТОҶИКИСТОН

ЭКСПЕРТИЗАИ ДАВЛАТИИ ЭКОЛОГӢ

734034, Ҷумҳурии Тоҷикистон,
ш.Душанбе, кӯчаи Шамсӣ, 5/1.
телеф: 2359683, 2359577, факс:2361353;
№ 1203-15
04» 09 с.2020

Тасдиқ мекунам:
Сардори Экспертизаи
давлатии экологӣ
_____Маҳмадуллозода Х.Р.

Хулосаи
Экспертизаи давлатии экологӣ оид ба таҳдид ва сохтмони инфрасохторҳои Агентии обуҳавошиносӣ дар ноҳияи Синои шаҳри Душанбе.

Ҳуҷҷатҳои пешниҳодшуда:

Дархости Директори Агентии обуҳавошиносӣ Дӯстзода Д. С. аз 31.08.2020

Ҳисобот оид ба арзёбии таъсиррасонӣ ба муҳити зист оид ба таҳдид ва сохтмони инфрасохторҳои Агентии обуҳавошиносӣ дар ноҳияи Синои шаҳри Душанбе.

Эксперти Экспертизаи давлатии экологӣ Ҷаҳонгири Мумин дар асоси талаботи қонунҳои Ҷумҳурии Тоҷикистон «Дар бораи ҳифзи муҳити зист», «Дар бораи экспертизаи экологӣ», «Дар бораи арзёбии таъсиррасонӣ ба муҳити зист», қарорҳои Ҳукумати Ҷумҳурии Тоҷикистон аз 3 декабри соли 2012, №697 «Дар бораи тартиби гузаронидани экспертизаи давлатии экологӣ» ва аз 1 ноябри соли 2018, №532 «Дар бораи Тартиби арзёбии таъсиррасонӣ ба муҳити зист, таснифи объектҳои арзёбии таъсиррасонӣ ба муҳити зист аз рӯи гурӯҳҳо вобаста ба хусусияти таъсиррасонии онҳо ба муҳити зист, меъёрҳое, ки дараҷаи хатарнокии объектҳои фаъолияти банақшагирифташавандаро барои муҳити зист муайян мекунанд» ҳисоботро оид ба арзёбии таъсиррасонӣ ба муҳити зист вобаста ба сохтмони бинои маъмурӣ бинои 1), биноҳои ёрирасон лаборатория, аудитория ва бинои намоишгоҳ (биноҳои 2, 3 ва 4) Агентии обуҳавошиноси инчунин ду бинои истиқоматӣ (биноҳои 5 ва 6) дар ноҳияи Синои шаҳри Душанбе, ки аз ҷониби Директори Агентии обуҳавошиносӣ Дӯстзода Д. С. пешниҳод шудааст, мавриди баррасӣ қарор дод.

Тибқи ҳисоботи пешниҳодшуда китъаи замин барои сохтмони сохтмони бинои маъмурӣ бинои 1), биноҳои ёрирасон лаборатория, аудитория ва бинои намоишгоҳ (биноҳои 2, 3 ва 4) Агентии обуҳавошиноси инчунин ду бинои истиқоматӣ (биноҳои 5 ва 6) дар

ноҳияи Синои шаҳри Душанбе пешбинӣ гардидааст. Масоҳати умумии қитъаи замин барои сохтмон инфрасохторҳои Агентии обуҳавошиносӣ 37287,0 метри мураббаъро ташкил медиҳад.

Вобаста ба таҷдид ва сохтмони инфрасохторҳои Агентии обуҳавошиносӣ баҳодиҳии пешакии экологӣ оид ба арзёбии таъсиррасонӣ ба муҳити зист аз ҷониби Бонки Осиёгии Рушд таҳия ва барои гирифтани хулосаи экспертизаи экологӣ пешниҳод гардидааст.

Пойтахти Ҷумҳурии Тоҷикистон-шаҳри Душанбе дар доманаи водии зеболанзари ҷанубии қаторкӯҳҳои Ҳисор дар баландии 750-840 метр аз сатҳи баҳри Балтик ҷойгир шудааст.

Душанбе яке аз калонтарин марказҳои саноатии Осиёи Марказӣ ба шумор рафта, саноат дар сохтори соҳавии иқтисодии шаҳр вазни қиёсии зиёде дорад. Саноати Душанбе бисёрсоҳа буда, бештар аз 470 корхонаи саноатии дорои шаклҳои гуногуни моликиятро дар бахшҳои энергетика, саноати сохтмонӣ, истеҳсоли масолеҳи сохтмонӣ, чӯбу тахта, полиграфӣ, саноати сабук ва хӯрокворӣ дарбар мегирад.

Душанбе аз чиҳати шумораи аҳолӣ шаҳри бузурги Тоҷикистон буда, шумораи бошандагонаш дар аввали январи соли 2017 824 ҳазорро ташкил медиҳад. Ба иттилои маъхазҳои таърихӣ дар шаҳри Душанбе соли 1924 тақрибан 4500 ҳазор нафар ва дар соли 90-уми асри гузашта 450 ҳазор нафар зиндагӣ мекарданд. Дар ҳоли ҳозир масоҳати шаҳр 124,6 км^2 буда, ба ноҳияҳои ҷаҳоргонаи маъмурии Исмоили Сомонӣ, Сино, Фирдавсӣ ва Шоҳмансур тақсим шудааст.

Душанбеи имрӯза як марказу макони шинохташудаи фаъолияти созмонҳои байналмилалии муқими Тоҷикистон мебошад.

Дар доираи дигар масъалаҳои афзалиятноки шаҳрдорӣ ба масъалаҳои такмили идоракунӣ дар соҳаи ҳифзи муҳити зист солҳои охир аҳамияти хосса дода шуда истодааст. Муносибат ба анҷоми фаъолият роҷеъ ба пешгирии номутаносибии экологӣ, ки ба ҷамъият манфиатҳои калони молиявӣ меорад, дигаргун гаштааст.

Бино ба маълумотҳои оморӣ афканиши моддаҳои заҳрнок ба ҳавои атмосфера аз ҷониби сарчашмаҳои доимӣ 30% ва 70% ифлосшавии ҳавои атмосфера дар шаҳри Душанбе ба воситаҳои нақлиёт рост меояд.

Обтаъминкунии марказонидашудаи Душанбе тибқи истгоҳи (Стансияи) обтозакунии Худҷоришаванда ва чоҳҳои амудӣ амалӣ шуда истодааст.

Ҳаҷми партовҳои обии КОС – шаҳри Душанбе 300 ҳазор метри мукааб дар як шабонарӯз буда, бо сохта шуда истодани биноҳои истиқоматӣ ва меҳмонхонаҳои замонавӣ рӯ ба афзоиш дорад.

Дар ҳудуди шаҳри Душанбе ҳамагӣ 113 км каналу селпартоҳо (ба истиснои канали калони Ҳисор) мавҷуданд.

Идоракунии партовҳо яке аз масъалаҳои муҳими шаҳр ба шумор меравад, алалхусус идоракунии партовҳои истеъмолӣ ва истеҳсолӣ тоза намудану кашонидани он ба партовгоҳи умумишаҳрӣ мушкилоти зиёдеро талаб мекунад.

Партовгоҳи партовҳои сахти маишии шаҳри Душанбе дар масоҳати 20, 0 га фаъолият карда истодааст

Намуди партовгоҳ идорашаванда буда партовҳо асосан бо ёрии техника (булдозер) тахту ҳамвор ва қабат ба қабат ҷойгир карда мешавад. Қисмати болоии ҷойгиронидаи партовҳо дар баландии 2 метр бо хок ва ё бо партовҳои сохтмонӣ пӯшонида мешавад, ки ғафсии хоки он 0,5 метрро ташкил медиҳад.

То санаи 12 январи соли 2017 шумораи умумии нуқтаҳои партовҷамъкунӣ дар шаҳри Душанбе 1570 ададро ташкил медиҳад, ки мутаносибан ба ноҳияи Сино 675 адад, ба ноҳияи И.Сомонӣ 257 адад, ба ноҳияи Фирдавсӣ 336 адад, ба ноҳияи Шоҳмансур бошад 263 адад ва корхонаю ташкилотҳои худхизматрасон 39 адад рост меояд.

Кабудизоркунии шаҳри Душанбе ва теппаҳои ҷангали гирду атрофи он, аз шимол то шарқ ба сурати умум қаноатбахш мебошад.

Низоми муомилот бо партовҳои истеҳсолӣ ва истеъмолие, ки дар шаҳри Душанбе ба вуқӯъ пайвастааст, дар асоси гӯронидани партовҳо дар партовгоҳи шаҳрии ПСМ асос ёфтааст.

Дар ҳудуди партовгоҳ коргоҳ оид ба сӯзонидани партовҳои тиббӣ ва сехи демеркуризатсияи лампаҳои люминитсентии симобдори аз истифода баромада сохта шудааст, ки иқтидори он 3000 адад метавонад лампаҳоро безарар гардонад аммо мутаасифона фаъолияти таҷҳизоти васлшуда бо сабабҳои номаълум талаботи имрузаро қонеъ карда наметавониста истодааст .

Дар партовгоҳ низоми ҷамъоварии алоҳида ва ба навъҳо ҷудокунии партовҳо ташкил карда нашудааст.

Дар сохтори имрӯзаи саноатии шаҳр саноати сохтмон, саноати мошинсозӣ, корхонаҳои саноати хӯрокворӣ ва маҳаллӣ, низоми нақлиёти автомобилӣ, роҳи оҳан ва нақлиёти ҳавоӣ бартарӣ доранд. Корхонаҳои бузурги шаҳри Душанбе Корхонаи воҳиди давлатии «Тоҷиксемент», Корхонаи воҳиди давлатии ҳавопаймоии «Тоҷикистон», Заводи арматурбарорӣ, ҷамъияти истеҳсолии «Тоҷиктекстил», ҷамъияи саҳомии «Тоҷирон», Корхонаи воҳиди давлатии «Роҳи оҳани Тоҷикистон», ва дигар корхонаҳо ба ҳисоб мераванд.

Партовҳои истеҳсолие, ки дар раванди фаъолият пайдо мегарданд, инчунин бинобар сабаби вуҷуд надоштани партовгоҳҳои саноатӣ, асосан истифодаи минбаъдаи худро наёфта, онҳо ба Партовгоҳи умумишаҳрии ПСМ бурда мешаванд. Ба истиснои партовҳои саноати бофандагӣ, мошинсозӣ ва коркарди фулузот, ки ҳамчун ашёи хоми такроран истеҳсолшаванда дар манбаи пайдоиш ва дигар корхонаҳои шаҳр истифодаи худро пайдо менамоянд.

Ҷорӣ намудани низоми баҳисобгирӣ ва ба тартиб даровардани ҷойгиркунии партовҳои пайдошавандаи сохтмонӣ баъди вайрон кардани биноҳо ва иншоотҳо, инчунин дар раванди сохтмон ба мақсад мувофиқ мебошад. Ҳамзамон коркарди партовҳои сохтмонии калонҳаҷм ба сангрезаи мукааб, тавассути ҷиҳозонидани таҷҳизоти резакунандаю ба навъҳо ҷудокунанда, аз ҷумла ҳаракаткунанда ҳалли худро талаб менамояд.

Барои минтақаи мазкур иқлими континенталӣ бо тобистони гарму дароз ва зимистони нисбатан сарду кӯтоҳ хос аст. Ҳарорати

миёнамоҳонаи моҳи аз ҳама сард -5^{0}С, моҳи гармтарин 36,2^{0}С-ро ташкил медиҳад. Рутубати нисбии миёнасолона 55% буда, дар моҳи январ-декабр бо қимати калонтарин ва моҳҳои июл-август ба нишондиҳандаи хурдтарин соҳиб мешавад. Миқдори солонаи боришот дар ноҳия 193мм мебошад. Миқдори аз ҳама зиёди боришот дар моҳи март-30мм ва моҳи апрел 28мм меборад. Аз моҳи феврал то моҳи май қариб нисфи меъёри солонаи боришот меборад. Боришоти камтарин дар моҳи август меборад.

Суръати миёнасолонаи шамол 4,6м/сонияро ташкил медиҳад. Шамоли бештар моҳи феврал ва камтарин моҳи июл ва октябр мевазад. Ба ҳисоби миёна шамоли ҷанубу ғарбӣ суръати калонтарин дорад. Шамол ҳам аз ҷанубу ғарб, ҳам аз шарқу ғарб мевазад. Дар мавсими сарди сол шамоли самти шарқидошта бартарӣ дорад. Дар даврахои дигар самти шамол рӯзона аз ҷанубу ғарб бошад, шабона аз самти шарқ мевазад. Барои минтақа такроршавии шамолҳои сахт (15м/сония) ба ҳисоби миёна 42 рӯзро ташкил мекунад.

Ба омилҳои мусбат дараҷаи баланди турбулентнокиро дар қабати наздизаминии атмосфера, камтакроршавии инверсияи ҳарорати ҳаворо, ки боиси парешоншавии интенсивии моддаҳои зарарнок дар ҳаво мегардад, дохил кардан мумкин аст.

Ҷиҳати манфӣ ин ба вуҷуд омадани боришоти нокифоя мебошад, ки имконияти бо боришоти атмосферӣ аз ҳаво шусташавии моддаҳои зарарнокро паст мекунад.

Таъсиррасонии эҳтимолии фаъолияти ба нақша гирифташуда ба муҳити зист алоқаманд аст, ба:

- гузаронидани корҳои сохтмонӣ;
- истифодаи объект.

Таъсиррасонии ба корҳои сохтмонӣ алоқамад, чун қоида характери муваққатӣ дорад. Таъсиррасонӣ дар давраи фаъолият бошад дар тамоми давраи истифодаи объект зоҳир мешавад.

Роҳҳои имконпазири воридшавии моддаҳои зарарнок ба муҳити зист ҳангоми татбиқи фаъолияти ба нақшагирифташуда иборат аст, аз:

- Партовҳои моддаҳои зарарноке, ки аз дастгоҳу таҷҳизотҳои асосӣ ва ёрирасон ба ҳавои атмосфера ворид мегарданд;
- газҳои зарарноки аз нақлиёти автомобилӣ бароянда;
- ихроҷи об аз системаи обгузарон;
- таровиши обпартовҳои сатҳӣ(боришот, обпошӣ, оби барф) ба воситаи минтақаи тозакунӣ(аэратсия).

Таъсиррасонӣ ба ҳавои атмосфера

Таъсиррасонӣ ба ҳавои атмосфера дар натиҷаи воридшавии моддаҳои зарарнок аз техникаҳои сохтмонӣ (экскаватор, булдозер ва ғайраҳо), ҳамчунин ҳангоми ҳаракати нақлиёти автомобилӣ ба амал меояд. Дар марҳилаи сохтмон ба ҳавои атмосфера партови моддаҳои зарарнок аз фаъолияти воситаҳои нақлиётӣ: кашонидани хок, маводҳои сохтмонӣ, моддаҳои сузишворӣ ва молиданӣ бо назардоти кам будани ҳаҷми корҳои сохтмонӣ назаррас пешгуи намешавад.

Таъсиррасонии омилҳои физикӣ

Манбаи асосии ғулғула ҳангоми корҳои сохтмонӣ иборат аст, аз

- наклиёти автомобилӣ ва техникаи сохтмонӣ, ки ҳангоми корҳои омодасозии майдони сохтмонӣ ва дар раванди корҳои сохтмонӣ-мантажкунӣ(гирифтани қабати ҳосилхези замин, кандани ҳандак, хобонидани хатҳои алоқа ва хатҳои муҳандисӣ ва ғ) истифода карда мешаванд. Ҳангоми корҳои сохтмонӣ корҳои наклиёти ва боркуниву борфарорӣ, ки ба майдони сохтмон расонидани маҳсулот, конструксия ва ҷузъҳо, дастгоҳу таҷҳизот, олотҳои кориро дар бар мегирад, амалӣ карда мешавад;

- корҳои сохтмонӣ(омодасозии маҳлули сохтмонӣ ва амсоли он, кафшеркунӣ, бурриши металл, коркарди механикии металл(кафшер ва бурриши луллаҳои металлӣ ва дигар конструксияҳои металлӣ) бомпушонӣ, андовакунӣ, рангкунӣ ва дигар корҳо.

Манбаи асосии ғулғула дар ҳудуди объект техникаҳои дар ҳудуди объект ҳаракаткунанда маҳсуб меёбанд.

Дигар таъсиррасонии физикӣ аз объект, чунончӣ майдони электромагнитӣ, афканишоти электромагнитӣ, ҳамчунин паҳншавии афканишоти лазерӣ ва дигар омилҳои физикӣ мавҷуд нестанд.

Таъсиррасонӣ ба обҳои руизаминӣ ва зеризаминӣ

Таъсиррасонӣ ба обҳои руизаминӣ ва зеризаминӣ дар ифлосшавии эҳтимолии онҳо дар натиҷаи ҳосилшавии партовобҳо аз ҳудуди объект ва харобшавӣ дар натиҷаи гирифтани обҳои зеризаминӣ барои обтаъминкунии техникӣ ва хоҷагидорӣ-маишӣ инъикос меёбад.

Тибқи ҳисобот аз сохтмон ва фаъолияти объект таъсиррасонӣ ба манбаҳои обҳои руизаминӣ ва зеризаминӣ мавҷуд нест.

Таъсиррасонӣ ба захираҳои замин ва қабати хокӣ

Таъсиррасонии бевостаи пешгуишаванда ба қабати хоки дар гирифтани қабати набототии хокӣ инъикос меёбад. Хоки ҳосилхези зиёдатӣ барои рекултиватсияи заминҳои кишоварзии камҳосил истифода бурда мешавад.

Таъсиррасонӣ ба оламаи набототу ҳайвонот

Таъсири бевосита ба олами набототу ҳайвонот пешгуӣ намегардад.

Ҳангоми риояи ҳамаи талаботи дар лоиҳа пешбинишуда таъсири номатлуб аз объекти ба нақша гирифташуда ба олами набототу ҳайвонот назаррас нест.

Таъсиррасонӣ ба объектҳои табиӣ, ки махсус муҳофизат мешаванд.

Бо назардоти мавҷуд набудани ҳудудҳои махсусмуҳофизатшаванда дар наздикии объекти ба нақша гирифташуда, таъсиррасонӣ ба объектҳои махсус муҳофизатшаванда пешгуи намешавад.

Дар минтақаи ҷойгирониии объект ҳудудҳои махсус муҳофизатшаванда ва манзаравӣ - истироҳатӣ мавҷуд нест. Растаниҳои нодир ва қадима, ки ба Қитоби сурхи Тоҷикистон дохил карда шудаанд, дар минтакаи татбиқи лоиҳа намеруянд.

Дар ҳудуди фаъолияти ба нақшагирифташуда ҷойи зист, афзоишёбӣ ва гаштугузори ҳайвонот, ҳамчунин роҳҳои ҷойивазкунии онҳо мавҷуд нест. ҷойи тухумгузории паррандаҳои нодир ва махсус муҳофизатшаванда ба қайд гирифта нашудааст.

Муомилот бо партовҳо.

Тибқи ҳисоботи пешниҳодшуда ҳангоми гузаронидани корҳои сохтмонӣ партовҳо ба ҳавои атмосфера, партовҳои сахти маишӣ ва сохтмонӣ ба вуҷуд меоянд. Дар ҳисобот тавсифи сифатӣ ва миқдории ин партовҳо тибқи санадҳои меъёрӣ-ҳуқуқии амалкунанда оварда шудаанд.

Ҳангоми истифодаи объект бошад партов□ои сахти маишӣ ва обӣ ба вуҷуд меоянд.

Партовҳои сахти маишӣ дар партовгоҳи муваққати ҷамъ ва бо тартиби муқарраршуда ба партовгоҳи расмӣ бароварда мешаванд.

Бо назардошти баррасии ҳуҷҷати пешниҳодшуда пешниҳод мегардад:

• ҳангоми таҷдид ва сохтмони инфрасохторҳои Агентии обуҳавошиносӣ талаботҳои Қоида ва меъёрҳои сохтмонӣ, меъёрҳои санитарӣ (СН) 245-71, Стандартҳои давлатӣ ва экологӣ, меъёр ва талаботҳои қонунгузориҳои Ҷумҳурии Тоҷикистон дар бахши ҳифз ва беҳдошти муҳити зист катъиян риоя карда шавад;

• пеш аз оғози корҳои сохтмонӣ нақша чорабиниҳои ҳифзи муҳити зист таҳия ва бо сохторҳои салоҳиятдор мувофиқа карда шавад;

• Нусхаи хулосаи мазкур ба Раёсати ҳифзи муҳити зисти шаҳри Душанбе дастрас карда шавад.

Назорат аз болои риояи қонунгузории Ҷумҳурии Тоҷикистон дар бахши ҳифз ва беҳдошти муҳити зист ба зиммаи Раёсати ҳифзи муҳити зисти шаҳри Душанбе гузошта шавад.

Экспертизаи давлатии экологии Кумитаи ҳифзи муҳити зисти назди Ҳукумати Ҷумҳурии Тоҷикистон ҳуҷҷатҳои пешниҳоднамудаи Директори Агентии обуҳавошиносӣ Дӯстзода Д. С.-ро оид ба таҷдид ва сохтмони инфрасохторҳои Агентии обуҳавошиносӣ, бо назардошти иҷрои қатъии супоришҳои дар боло зикрёфта мувофиқа менамояд.

Эксперт: Ҷаҳонгири Мумин

Annex I: Conclusion of The State ecological expertise of CEP for updated IEE

Unofficial translation

Conclusion

of the State Ecological Expertise on Reconstruction and Construction of Infrastructure of the Meteorological Agency in Dushanbe Sino district.

Submitted documents:

Request the Director of the Meteorology Agency Dustzoda D. S. from 31.08.2020

Environmental Impact Monitoring Report on Rehabilitation and Construction of Infrastructure of the Meteorological Agency in Dushanbe Sino District.

State Environmental Expert Expertise Jahongiri Mumin in accordance with the requirements of the laws of the Republic of Tajikistan "On Environmental Protection", "On Ecological Expertise", "On Environmental monitoring Assessment", Decrees of the Government of the Republic of Tajikistan dated December 3, 2012, № 697 “On the procedure for conducting state ecological expertise” and from November 1, 2018, № 2532 “On the procedure for assessing the monitoring on the environment, classification of environmental objects monitoring assessment by groups depending on the nature of their monitoring on the environment, criteria, Environmental Monitoring Assessment Report related to the construction of the administrative building 1) auxiliary buildings laboratory, auditorium and exhibition building (buildings 2, 3 and 4) Meteorological Agency as well as two buildings residential buildings (buildings 5 and 6) in Dushanbe Sino district, provided by the Director of the Meteorological Agency Dustzoda D. S. proposed to be considered.

According to the report, a plot of land is provided for the construction of an administrative building. 1) auxiliary buildings laboratory, auditorium and exhibition building (buildings 2, 3 and 4) of the Meteorological Agency, as well as two residential buildings (buildings 5 and 6) in Dushanbe Sino district. The total area of the plot land for construction of the infrastructure of the Meteorological Agency is 37287.0 square meters.

In connection with the reconstruction and construction of the infrastructure of the Meteorological Agency, a preliminary environmental assessment for environmental impact monitoring has been prepared by the Asian Development Bank and submitted for an environmental review.

The capital of the Republic of Tajikistan - Dushanbe is located in the foothills of the beautiful southern valley of the Hisor range at an altitude of 750-840 meters above Baltic Sea level.

Dushanbe is one of the largest industrial centers in Central Asia, and industry has a significant share in the sector economic structure of the city. Dushanbe's industry is multidisciplinary and includes more than 470 industrial enterprises of various forms of ownership in the energy, construction, building materials, wood & board, printing, light and food industries.

Dushanbe is the largest city in Tajikistan in terms of population, with a population of 824 thousand at the beginning of January 2017. According to historical sources, in Dushanbe in 1924 lived about 4500 thousand people, and in the 90s of the last century - 450 thousand people. Currently the area of the city is 124.6 km2 and is divided into four administrative districts of Ismoili Somoni, Sino, Firdavsi and Shohmansur.

Today, Dushanbe is a well-known center and place of activity of international organizations based in Tajikistan.

In the framework of other priority issues of the city, in recent years, special attention is paid to improving governance in the field of environmental protection. Attitudes toward performance have changed to prevent environmental imbalances that bring significant financial benefits to society.

According to statistics, emissions of toxic substances into the atmosphere by permanent sources account for 30% and 700/0 of air pollution in Dushanbe refer to vehicles.

Centralized water supply of Dushanbe is carried out by Self-priming water treatment station and vertical wells.

The volume of water waste of Sewage Treatment Plant (STP) - Dushanbe is 300 thousand cubic meters per day, and 60 residential buildings and modern hotels are being built.

There are only 113 km of mudflow canals (excluding the Hisor Big Canal) in Dushanbe.

Waste management is one of the most important issues in the city, especially the management of consumer and industrial waste, which requires a lot of problems in its treatment and transportation to the city landfill.

The solid waste landfill in Dushanbe operates in an area of 20.0 hectares.

The type of landfill is manageable and the waste is mainly disposed of by 60 bulldozers. The upper part of the landfill is covered by 60 m of soil or 60 m of construction waste at a height of 2 m, with a soil thickness of 0.5 m.

As of January 12, 2017, the total number of landfills in Dushanbe is 1570 units, which is 675 units in Sino district, 257 units in I. Somoni district, 336 units in Firdavsi district, 263 units in Shohmansur district and self-service enterprises and organizations there are 39 units.

Landscaping of Dushanbe and surrounding forest hills, from north to east, is generally “satisfactory”.

The circulation system of 60 industrial and consumer wastes generated in Dushanbe is based on the disposal of wastes in the municipal PSM waste dump.

On the territory of the landfill there is a workshop for incineration of medical waste and a shop for demercurization of obsolete mercury fluorescent lamps, the capacity of which can decontaminate 3000 lamps, but unfortunately the operation of the installed equipment for 60 unknown reasons does not meet today's requirements.

There is no separate collection and sorting system in the landfill.

The current industrial structure of the city is dominated by the construction industry, machine-building industry, enterprises of the food and local industries, the system of road transport, iron ore and lava transport. The largest enterprises of Dushanbe are the State Unitary Enterprise "Tajikcement", the State Unitary Enterprise "Tajikistan", the Armature Plant, the Production Company "Tajiktextile", the Joint Stock Company "Tojiron", the State Unitary Enterprise "Rohi Ohani Tojikiston" and others.

Industrial wastes generated in the process of operation, as well as due to the lack of industrial wastes, are mainly not used for further use, and they are taken to the PSM municipal waste disposal site. With the exception of wastes from the textile industry, machine building and metal processing, which are used as recycled raw materials at the source and other enterprises of the city.

It is expedient to introduce a system of accounting and streamlining the disposal of construction waste after the demolition of buildings and structures, as well as during the construction process. At

the same time, the processing of large volumes of construction waste into cubes requires the solution by equipping the crushing, sorting and moving equipment.

The continental climate of this region is characterized by 60 long and hot summers and relatively cold and short winters. The average monthly temperature of the coldest month is -50C, the hottest month is 36.20C. The average annual relative humidity is 55%, with the highest values in January-December and the lowest values in July-August. The annual amount of precipitation in the district is 193 mm. The maximum precipitations are in March-30 mm, April 28 mm. From February to May, it receives almost half of the annual rainfall. The lowest rainfall is in August.

The average annual wind speed is 4.6 m/s. Most winds are in February and the least in July and October. On average, the south-west wind has the highest speed. The wind is blowing from the south-west and east-west. In the cold season, the east wind blows. At other times, the wind blows from the south-west during the day and from the east at night. For the region, the average frequency of strong winds (15 m/s) is 42 days.

Positive factors include high turbulence in the subsoil, reduced inversion of air temperature, which leads to intensive dispersion of harmful substances in the air.

On the downside, this is due to insufficient precipitation, which reduces the possibility of leaching of harmful substances from the air by atmospheric precipitation.

The potential impact of the planned activities on the environment is as follows:

- conducting out construction works; - use of the object.

Impacts related to construction work are usually temporary. The impact is felt during the life of the facility.

Possible ways of introduction of harmful substances into the environment during the implementation of the planned activities are:

- - Emissions of harmful substances into the atmosphere from the main and auxiliary devices and equipment;
- - harmful gases emitted from motor vehicles;
- - water leakage from water supply system;
- Discharge of surface water (precipitation, sprinkler, snow water) through the aeration zone.

Impact on atmospheric air

The impact on the atmosphere occurs as a result of the entry of harmful substances from the construction machinery (excavators, bulldozers, etc.), as well as during the traffic. During the construction phase, emissions of harmful substances from the vehicles: transportation of soil, construction materials, fuels and lubricants are not significantly forecasted due to the small volume of construction works.

Impact of physical factors

The main sources of noise during construction are:

- motor vehicles and construction equipment used in the preparation of the construction site and in the process of construction and installation works (removal of topsoil, digging trenches, laying communication lines and engineering lines, etc.). During the construction works,

transportation and loading and unloading works are carried out, which include the delivery of products, structures and components, machinery and equipment to the construction site;

- construction works (preparation of construction mortar and the like, welding, metal cutting, mechanical processing of metal (welding and cutting of metal pipes and other metal structures), roofing, plastering, painting and other works.

The main source of noise on the territory of the object is the machinery moving on the territory of the object.

There are no other physical effects from the object, such as electromagnetic fields, electromagnetic radiation, as well as the propagation of laser radiation and other physical factors.

Impact on surface and groundwater

The impact on surface and groundwater is reflected in their potential contamination as a result of waste generation from the facility and degradation as a result of groundwater abstraction for technical and domestic water supply.

According to the report from the construction and operation of the facility, there is no impact on surface and groundwater sources.

Impact on land and soil resources

The predicted direct effect on the soil layer is reflected in the acquisition of the vegetative layer of the soil. Excess fertile soil is used for reclamation of low-yielding agricultural lands.

Impact on flora and fauna

The direct impact on flora and fauna is unpredictable.

If all the requirements of the project are observed, the negative impact of the planned object on the flora and fauna will not be significant.

Impact on natural objects that are specially protected.

Taking into account the absence of specially protected areas in the vicinity of the planned object, the impact on specially protected objects is not expected.

There are no specially protected and scenic areas in the area of the facility. Rare and ancient plants listed in the Red Data Book of Tajikistan do not grow in the project area.

There are no habitats, growth and movement of animals, as well as ways to move them within the planned activities. The spawning grounds of rare and specially protected birds have not been “registered.

Waste management.

According to the report, during the construction works, wastes are generated into the atmosphere, solid domestic and construction wastes. The report provides a qualitative and amount description of these wastes in accordance with applicable regulations.

During the operation of the facility, solid domestic and water wastes are generated.

Solid household waste is collected in a temporary landfill and disposed of in accordance with the established procedure.

Considering the review of the submitted document, the following is attached:

- During of Construction requirements of Meteorological Agency rules and norms, sanitary norms (SN) 245-71, State and ecological standards, norms and requirements of the legislation of the Republic of Tajikistan in the field of protection and improvement of environment in case of reconstruction and construction of infrastructure;
- Before the start of construction work to coordinate measures for the protection of the environment and 60 competent authorities;
- A copy of this conclusion should be provided to the Department of Environmental Protection of Dushanbe.

Control over observance of the legislation of the Republic of Tajikistan in the field of protection and improvement of environment is assigned to Department of environment protection of the city of Dushanbe.

State ecological expertise of the Committee for Environmental Protection under the Government of the Republic of Tajikistan Documents submitted by the Director of the Meteorological Agency Dustzoda D. S. on the reconstruction and construction of infrastructure of the Meteorological Agency, 60 taking into account the strict implementation of the above tasks.

Signed by Expert Jahongiri Mumin

Annex 2

Protocols of the air quality monitoring.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Ambient air quality monitoring

Representative of the Committee: Behbudov N.

Representative of the enterprise: Shukurov A.

Measurement date: 07.01-08.01.2023

№	Object standard RT	ingredients, mg/m^3						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.11	1.99	0.041	0.02	0.04	0.0008	0.0005
2	Side of the railway line	0.09	2.45	0.039	0.03	0.03	0.0006	0.0004
3	Near a residential building	0.08	2.38	0.035	0.04	0.03	0.0004	0.0003

Head of Analytical Control Center — Behbudov N.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Ambient air quality monitoring

Representative of the Committee: Behbudov N.

Representative of the enterprise: Shukurov A.

Measurement date: 13.02-14.02.2023

№	Object standard RT	ingredients, mg/m^3						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.10	1.56	0.044	0.03	0.03	0.0007	0.0004
2	Side of the railway line	0.08	2.61	0.031	0.02	0.02	0.0003	0.0003
3	Near a residential building	0.07	2.48	0.037	0.03	0.01	0.0003	0.0002

Head of Analytical Control Center — Behbudov N.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Ambient air quality monitoring

Representative of the Committee: Behbudov N.

Representative of the enterprise: Shukurov A.

Measurement date: 17.03-18.03.2023

№	Object standard RT	ingredients, mg/m^3						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.11	2.07	0.006	0.007	0.02	0.0006	0.002
2	Side of the railway line	0.10	2.00	0.007	0.005	0.03	0.0005	0.003
3	Near a residential building	0.13	1.98	0.003	0.003	0.01	0.0009	0.002

МАРКАЗИ НАЗОРАТИ ТАҲЛИЛИЮ ТАШХИСӢ

Head of Analytical Control Center

Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Ambient air quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.04-18.04.2023

№	Object standard RT	ingredients, mg/m^3						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.11	1.07	0.012	0.005	0.03	0.0004	0.0003
2	Side of the railway line	0.11	2.03	0.010	0.003	0.02	0.0003	0.002
3	Near a residential building	0.12	2.00	0.009	0.0004	0.02	0.0006	0.0002

Head of Analytical Control Center — Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Ambient air quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.05-18.05.2023

№	Object standard RT	ingredients, mg/m³						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.8	1.98	0.010	0.005	0.04	0.0003	0.0003
2	Side of the railway line	0.8	1.23	0.010	0.004	0.03	0.0004	0.002
3	Near a residential building	0.10	1.00	0.009	0.006	0.02	0.0006	0.0002

Head of Analytical Control Center

Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 11

Ambient air quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.06-18.06.2023

№	Object standard RT	ingredients, mg/m^3						
	Maximum Permissible Concentration	TSP 0.15	CO 3.0	NO_2 0.085	NO 0.04	SO_2 0.05	CH_2OH 0.003	HOH 0.003
1	Highway side	0.9	2.03	0.017	0.005	0.03	0.0002	0.0002
2	Side of the railway line	0.9	1.13	0.09	0.004	0.03	0.0002	0.001
3	Near a residential building	0.8	1.14	0.007	0.006	0.01	0.0003	0.0003

Head of Analytical Control Center

Sudurzoda S.

Annex 3

Protocols of the noise quality monitoring.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Noise quality monitoring

Representative of the Committee: Behbudov N.

Representative of the enterprise: Shukurov A.

Measurement date: 07.01-08.01.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	70.0
2	Side of the railway line	75	75	70.0
3	Near a residential building	55	55	50.8

Head of Analytical Control Center — Behbudov N.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Noise quality monitoring

Representative of the Committee: Behbudov N.

Representative of the enterprise: Shukurov A.

Measurement date: 13.02-14.02.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	72.0
2	Side of the railway line	75	75	73.0
3	Near a residential building	55	55	53.7

Head of Analytical Control Center — Behbudov N.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Noise quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.03-18.03.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	71.0
2	Side of the railway line	75	75	70.5
3	Near a residential building	55	55	52.6

Head of Analytical Control Center — Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Noise quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.04-18.04.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	69.3
2	Side of the railway line	75	75	72.1
3	Near a residential building	55	55	48.6

Head of Analytical Control Center — Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 9

Noise quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.05-18.05.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	67.1
2	Side of the railway line	75	75	65.3
3	Near a residential building	55	55	46.8

Head of Analytical Control Center

Sudurzoda S.

COMMITTEE FOR ENVIRONMENTAL PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

Analytical Control Center

Protocol № 12

Noise quality monitoring

Representative of the Committee: Sudurzoda S.

Representative of the enterprise: Shukurov A.

Measurement date: 17.06-18.06.2023

№	Measuring point	Noise standards in decibels		Line indicator (max-min)
		7:00-23:00	23:00-06:00	
1	Highway side	75	75	68.2
2	Side of the railway line	75	75	66.1
3	Near a residential building	55	55	48.3

Head of Analytical Control Center

Sudurzoda S.