Semi - Annual Environmental Monitoring Report

Project №: 50176-002
July – December 2022

Kyrgyz Republic: Issyk-Kul Wastewater Management Project financed by the Asian Development Bank

Prepared by: - O. Mete Cilek, Team Leader
Temelsu International Engineering Services Inc.

- Zinina Olga, National Environmental Protection Specialist
Temelsu International Engineering Services Inc

For: Issyk-Kul Wastewater Management Project under The Department of Construction and Engineering Infrastructure (DCEI) under the State Agency for Architecture, Construction, Housing and Communal Services under the Cabinet of the Kyrgyz Republic

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APPENDICES

Abbreviations

ADB	Asian Development Bank
APS	Architecture and Planning Specifications
APU/ETU	Russian acronym for Architectural and Technical Approval
BOD_5	Biological Oxygen Demand (5 day)
BoQ	Bill of Quantities
BV	Balykchy Vodokanal
COD	Chemical Oxygen Demand
DCEI	The Department of Construction and Engineering Infrastructure
CabMin KR	Cabinet of the Kyrgyz Republic
DDWSSD	The Department of Drinking Water Supply and Sewerage Development under the Cabinet of the Kyrgyz Republic
DSC	Design and Supervision Consultant
EA	Executing Agency
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ETS	Engineering and Technical Specifications
GKR	Government of Kyrgyz Republic
ICB	International Competitive Bidding
IEE	Initial Environmental Examination
IFC	International Finance Corporation
ISDP	Issyk-Kul Sustainable Development Project
ITA of MNRETS	Issyk-Kul Territorial Administration
IWMP	Issyk-Kul Wastewater Management Project
KVK	Vodokanal, Karakol
LARP	Land Acquisition and Resettlement Plan
MNRETS	Ministry of Natural Resources, Ecology and Technical Supervision of Kyrgyz Republic
NTP	Notice to Commence
OOS	Russian acronym for Environment Protection
EIA	Russian acronym for “Assessment of Environmental Impacts”
PIU	Project Implementation Unit

PMO	Project Implementation Unit
PRGPKRIKR	Permanent Representative of the President of the Kyrgyz Republic in Issyk-Kul Region
OC	Public Consultation Meeting
SAACHCS	State Agency for Architecture, Construction, Housing and Communal Services under the Cabinet of the Kyrgyz Republic
SAEMR	Semi - Annual Environmental Monitoring Report
SSEMP	Site-Specific Environmental Management Plans
SNiP	Russian acronym for Construction Codes and Regulations
SPZ	Sanitary Protection Zone
WSS	Water supply and sanitation
WWTP	Wastewater Treatment Plant

Units and Currencies

°C	degree Celsius
ha	hectare
km	kilometers
m³	cubic meters
m³/d	cubic meter per day
mg/l	milligram per liter
Mg/Ol	milligram Oxygen per liter
MLD	million liter per day
US $	United States Dollar

1 INTRODUCTION

1.1 Preamble

1. This report is the 6th Semi-Annual Environmental Monitoring Report (SAEMR) for the Issyk-Kul Wastewater Management Project. It covers the IWMP activities between the period of 01 July, 2022 and 31 December, 2022.

1.2 Headline Information

2. In order to secure sustainable and reliable wastewater treatment services in Balykchy and Karakol, sewerage networks will be improved and expanded. IWMP is expected to achieve the following outputs:

   i. Balykchy and Karakol wastewater systems improved.
   ii. Improved capacity of "Vodokanals"
   iii. Septage management services improved and sanitation and hygiene awareness increased.

3. Today, the coverage of the population with sewage treatment plants is at a low level: 35% in Balykchy and 45% in Karakol.

4. In this regard, the Issyk-Kul Wastewater Management Project focuses on sewage treatment facilities, expansion of sewerage networks, considering the connection of an additional 850 households in Balykchy city and 1200 households in Karakol city.

5. The implementation of this activity will increase the coverage rate to an estimated 45% in Balykchy and 60% in Karakol.

6. Issyk-Kul Wastewater Management Project has been classified as environmental assessment category B according to ADB procedures, the impacts of the subproject were assessed in the Initial Environmental Examination, conducted according to ADB Safeguard Policy Statement (2009). The project envisages temporary environmental impacts during the construction phase mainly due to dust, noise, vibration, solid waste and movement of construction equipment, as well as obstructed traffic. These impacts can be controlled, minimized and mitigated.

7. During the reporting period within the framework of the Project:

   A. <u>Balykchy City</u>

   - Impulse Osh Ltd. executed the civil works on Togolok Moldo and Mambetalieva streets with the total length of 5,103 m pipe laying. The works were suspended starting from December 10 due to weather conditions.

- Profit Express Ltd. executed the civil works on Toktosunova, Sharipova, Kaldybaeva with the total length 5,332 m pipe laying including connection to a school. The works were suspended starting from December 5 due to weather conditions.

- Consortium of Contractor CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture implements the works for modernization of Balykchy WWTP. The Contractor has corrected the non-compliances occurred during the construction (the Safeguards Review Mission has pointed out that the contractor started the civil works without an approved SSEMP from the Project Management Office (PMO)), and Corrective Action Plan was developed.

  The PMO approved the interim SEMP for construction phase of Balykchy WWTP (including the works up to December 31. 2022) on September 1, 2022. After that, construction work on Balykchy WWTP was resumed. Contractor has completed concreting of the foundations of Biological Tank, Sedimentation Tank, Inlet Regulating Tank and Mechanical Workshop and concrete of two floors of the Administration Building was casted during the reporting period.

B. Karakol City:

- Minur Ltd. carried out the construction of sewage networks on Gebze, Akhunbaeva, Alybakov, Zhamansarieva, Abdurakhmanov, Moskovskaya streets with a total length of pipe laying 4,655meters. The works were suspended starting from December 10 due to weather conditions.

- The consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd. conducted the civil works on Asanaliev, Tumanov, Kadyrov, Sovetskaya, Oktyabrskaya streets and installed length of 1;,898.5 m pipes. The works were suspended starting from December 10 due to weather conditions.

- Sewage Pump Station (SPS) №4 in Pristan-Przhevalsk An Environmental Impact Assessment (OVOS) (acronym in Russian for Environmental Impact Assessment) shall be developed (currently under development) during the detailed designing in accordance with the General Technical Regulations on Environmental Safety, the Regulation on Environmental Impact Assessment (OVOS) Procedure (Resolution of the KR Government No. 60 dated 13.02.2015), the Regulation on Procedure of State Environmental Expertise (Resolution of the KR Government No. 248 dated 07.05.2014; also section “Environmental Protection” of Karakol sewerage system improvement design was developed. SITE: “SPS-4 and collector from SPS-4 to SPS-

2, the 2nd Phase of construction" is under review by the State Ecological Expertise now.

8. Also, during the reporting period the following activities have been carried out within the scope of the project:

- Activities for updating Balykchy IEE have been completed. Draft updated Balykchy IEE was submitted to ADB for review on November 30,2022.
- Sludge Management Plan has been developed which is under review of ADB;

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

9. Recognizing the significant ecological value of Lake Issyk-Kul and its region, the Government of the Kyrgyz Republic is implementing significant reforms in the water supply and sanitation sector. Strategic directions were defined in the context of national development and tourism in Issyk-Kul as a priority component of the economic development of the region and included in the National Development Strategy of the Kyrgyz Republic for 2018-2040 and the Program for the Development of Drinking Water Supply and Wastewater Systems in Settlements of the Kyrgyz Republic until 2026 (Decree of the Government of the Kyrgyz Republic (GoKR) dated June 12, 2020 No. 330).

10. Asian Development Bank (ADB) is helping to improve the management of environmental protection and urban services in the region through the implementation of the Issyk-Kul sustainable development projects.

11. In the period between 2009-2017, ADB implemented the Issyk-Kul Sustainable Development Project worth 30 million USD. The project was designed for a long-term period with a phased approach to supporting environmental management and improving the provision of urban public services in the Issyk-Kul region. The first phase of the urban development program was to improve access to drinking water and safe sanitation, including the use of proven technologies for the treatment and disposal of solid and liquid wastes and wastewater. Feasibility studies were prepared for Balykchy, Cholpon-Ata and Karakol for the rehabilitation and construction of drinking water supply and sewerage systems under this project.

12. The current Issyk-Kul Wastewater Management Project (IWMP) thus complements these initiatives by further improving wastewater systems in the two cities, Balykchy and Karakol, significantly improving health, hygiene and sanitation standards.

13. The project was approved by the ADB Board of Directors on 20 November 2018 and Grant and Loan Agreements between the ADB and the GKR were signed on 28 December 2018. The Law of the Kyrgyz Republic No. 60 "On Ratification of the Credit Agreement" dated July 16, 2019 was published in the newspaper "Erkin Too" No. 2019 dated July 19, 2019.

14. The ADB issued Notice to Proceed (NTP) on 16 August 2019 which sets the date of the Project’s entry into force and, in accordance with the Grant and Credit Agreements of 28 December 2018, the project is to be implemented from 16 August 2019 to 31 December 2024. Kyrgyz Republic Resident Mission (KYRM) is the body supervising the project.

15. Within the scope of Issyk-Kul Wastewater Management Project an Initial Environmental Examination (IEE) report has been prepared by Department of Drinking Water Supply and

Sewerage Development (DDWSSD) under State Agency for Architecture, Construction and Housing and Communal Services under the Cabinet of the Kyrgyz Republic for the ADB which was also included in the feasibility report. The final version of IEE was published on ADB's website on September 2018. EA and ADB have decided to develop two Initial Environmental Examinations (IEEs) to cover Balykchy and Karakol Wastewater Treatment Plants (WWTPs)

16. The Issyk-Kul Wastewater Management Project is aimed to maintain the sensitive ecosystem balance of Issyk-Kul Lake, improve and expand access to reliable, sustainable and affordable sewerage services in Balykchy and Karakol, and provides the construction and expansion of existing wastewater treatment systems, strengthening institutional capacity and increasing the sustainability of water supply and sanitation services (WSS) in Balykchy and Karakol (see the location of two cities is shown in Figure 2-1).

Source: Esri, 2020

Figure 2-1 Location of Project Towns of Balykchy and Karakol

17. The project outcomes should ensure (i) improved sewerage and wastewater treatment systems in the cities of Balykchy and Karakol, (ii) strengthened institutional capacity of

Vodokanal Municipal Enterprises, and (iii) improved septic sludge management and sanitation.

18. The project envisages the construction or rehabilitation of sewerage networks and treatment facilities, including WWTP, pump stations, pipelines and related infrastructure, which will significantly improve health, hygiene and sanitation standards.

19. This Project will increase access to potable water and safe sanitation services, including use of proven technologies for treatment and disposal of solid and liquid waste in the cities of Balykchy and Karakol and includes three components;

- Component (A): Wastewater Treatment and collection.
- Component (B): Enhancing Vodokanals institutional and service-oriented capacity;
- Component (C): Improve awareness for public health implications and wastewater management in Balykchy and Karakol.

Balykchy Sewerage Network Extension:

20. Currently, 4156 households and 106 commercial/industrial/institutional/tourism organizations are connected to the sewerage system in Balykchy. The existing sewerage network consists of 64 km of non-pressure sewers built in the 1970s and currently serves about 40% of the population. IWMP will provide 10.6 km of sewer networks on six streets, which will connect about 4015 additional households (55%) to the sewer network.

Karakol Sewerage Network Extension:

21. About 38% of all households in Karakol are connected to the sewage system, most of which live in multi-story buildings. Currently, about 25 000 people (7301 households) use services of a centralized sewage system. The length of the sewerage network of the city is approximately 110 km. In addition, the municipal enterprise “Karakol Vodokanal” provides sewerage services to 38 budget organizations, 251 commercial enterprises and 1 industrial enterprise. IWMP will provide 12,7 km of sewer networks on six streets, which will connect about 3248 additional households (55%) to the sewer network.

Construction of a Pump Station (PS-4) at Pristan, Karakol city:

22. In addition to the non-pressure sewerage system in Karakol, the village of Pristan (TSU No. 8) is served by a gravity-pressure combined system. This system includes 4 pump stations, 3 of which were rehabilitated under the first phase of Issyk-Kul Sustainable Development Project (IKSDP). The fourth sewage pump station is located in close proximity to Issyk-Kul Lake and is in a semi-ruined non-operating stating.

23. Based on loads resulted from wastewater volume, the technical solutions for SPS No.4 in Karakol City are adopted as 2 phases of construction:

24. The following structures are considered for Phase no. 1 of construction.

- The inlet reservoir is a metal wastewater reservoir with a storage capacity of up to 50 m^3.
- Site for placement of a reservoir has an area of 1350 m^2 with perimeter fencing along the protection zone and vehicle access.
- sewage trucks with a tank volume of 16 m^3 to transport out sewage.

25. The structures of construction phase No.2 are described in a separate design. The following structures are considered for Phase no. 2 of construction:

- Sewage Pump station with two submersible pumps (one - operating, one - standby). The capacity is 30 m3/h, head is 35 m. The pumps will work in turns in the order determined by an automatic control system.

  Pump station is supplied as a package:

  - Fiberglass receiving tank
  - Submersible pumps
  - Pump control panel
  - Pavilion above the pump station with an approximate dimension of 2.5x2.5 m.

- Emergency reservoir in metal structures with an effective volume of up to 50 m3

- Pressure collector D_u = 125 mm (D_{outer}=140 mm), length is 2.9 km. The diameter of pipeline is selected based on the throughput capacity – 30 m3/hour and the permissible wastewater flow rate - 0.7 m/s. Installation method: underground

26. At intersection with Karakol river, the collector will be installed in a case with D_u+350 mm, which is placed inside one-span metal truss. The truss will be installed on underground reinforced concrete supports located on both river banks. The supports and truss are located outside the scouring zone and zone of washing out. A special manhole with discharge valve will be installed at the lower part of collector for dewatering of the collector lower part. This solution provides:

    • Stable and reliable operation of the crossing during flood and maximum flow in Karakol river.

    • The case prevents flow of wastewater into the river in emergency cases i.e. creates the safe operation for environmental considerations.

27. On-site power supply networks with the installation of own transformer 25 kVA. Power load is 22 kW.

28. Pump station site with an area of 1350 m^2 with vehicle access and fencing along the perimeter.

Balykchy WWTP Reconstruction

29. The existing wastewater treatment plant is located in the 5 km northwest of the centre of Balykcy city and were constructed in 1980s. With the beginning of the work of the WWTP, sampling and analysis of wastewater from the WWTP are carried out by the laboratory of the territorial administration of the MNRETS.

30. A general scheme of the existing Balykchy WWTP has been given at the Figure 2 2. As it has been indicated in the figure the treatment system designed to use the conventional active sludge process to treat the wastewater, including facultative ponds for tertiary treatment purposes.

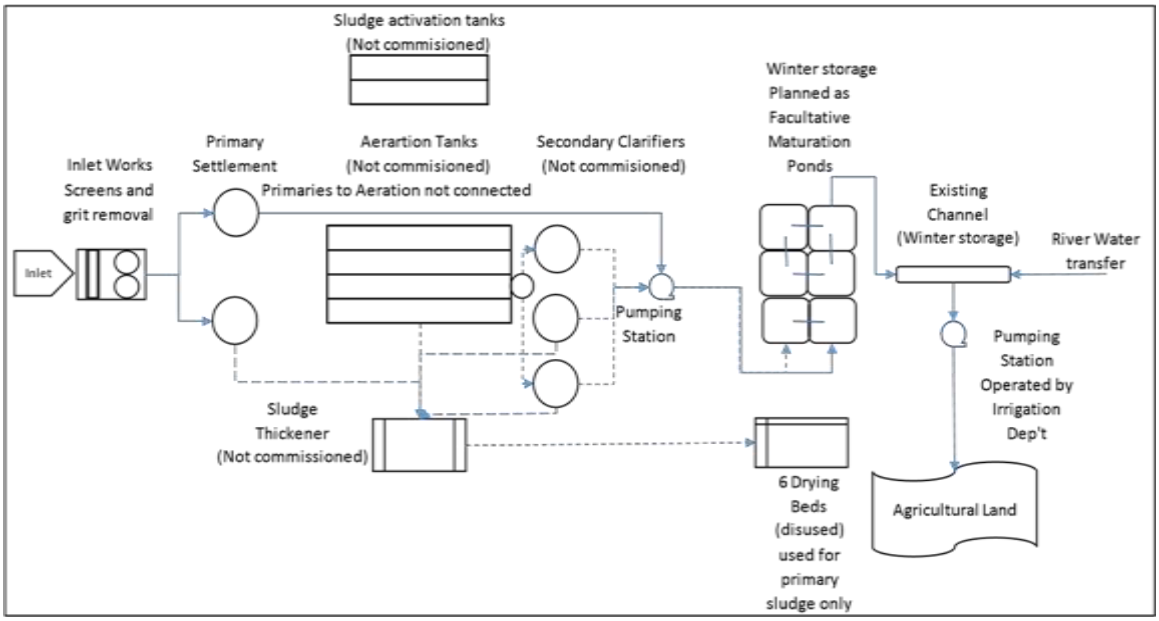


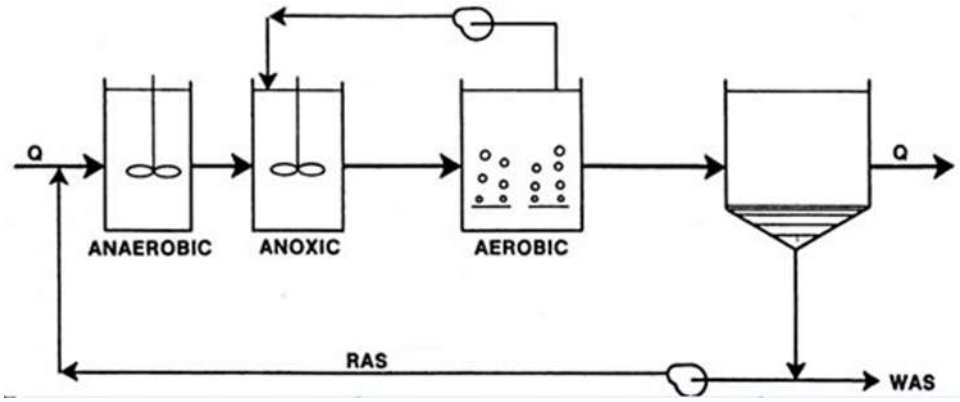
Figure 2.2 Schematic Illustration of Balykchy WWTP Process

31. The Balykchy Sewage Treatment Plant is designed and will be built to cope with 4200 m^3/d incoming wastewater. Process includes mechanical treatment stage comprising coarse screen, fine screen and grit removal units, biological treatment and sludge drying.

32. Biological treatment unit is an integrated sewage treatment tank designed for the Project, which consists of the modified A20 biochemical tank, sludge pump tank, secondary sedimentation tank and secondary lift pump tank.

33. The process treatment part, also known as the biochemical treatment part of the modified A2O biochemical tank will be a reinforced concrete structure consisting of two series, and each series will include the anaerobic tank, anoxic tank and oxic tank.

Schematic flow diagram of A2O



34. The typical useful service life for most mechanical facilities is 15 to 20 years. Useful service life for most electrical gear and variable frequency drives ranges from 15 to 30 years. After Approximately 40 years of its construction Balykchy WWTP has lost its functionality because of improvements or maintenance practices that could not be implemented. Balykchy WWTP Balykchy WWTP has been operated by Balykchy Vodokanal (BVK). Balykchy BVK Because of chronic and severe financial shortages BVK faced, the operation of Balykchy WWTP has been kept going by employees working without the benefit of proper written operating procedures, maintenance registers, appropriate tools and equipment, or professional training. Besides this, there is a lack of funding and weak administrative support for improving existing conditions. The new Balykchy WWTP plant will be designed and constructed with a project delivery method of design and build construction.

35. The Contractor has corrected the non-compliances occurred during the construction (earthworks for a tank without Balykchy IEE updated and SSEMP approved by EA), and Corrective Action Plan was developed. The SSEMP currently in effect is an interim SSEMP and is valid for works until December 31, 2022. The contractor will submit a revised SSEMP for works starting from December onwards

Karakol WWTP Reconstruction

36. The existing wastewater treatment plant is located in the northern suburb of the city and were constructed in 1980 of the last centuries. Currently, the actual quantity of influent wastewater received by WWTP has not been measured, however, according to estimates of the Karakol

Vodokanal (KVK), the average existing flow is 7,500 m³/day with the influent flow of about 6 000 m³/day in the winter and 12 000 m³/day in the summer.

37. New Karakol WWTP will be designed and constructed according to the project implementation method “design and construction”.

38. On December 21, 2022, a contract was signed with a Consortium of HAYAT GROUP LLC and BIOWORKS Verfahrenstechnik GmbH in the amount of 17,830,897. 31US$.

39. On January 13, 2023, the construction site was officially handed over to the Contractor.

Sludge Management

40. Sludge accumulated in Balykchy and Karakol wastewater ponds and seasonal irrigation pond of Karakol decreases the storage capacity of the ponds. The sludge sampling and analysis plan, including parameters, was agreed with ADB and approved by ADB in July 2021. In October 2021, the laboratory with international accreditation "Çevre Endüstriyel Analiz Lab. Hizmetleri Tic.A.Ş", Istanbul, Turkey and the Karakol Laboratory of the Department of Disease Prevention and State Sanitary and Epidemiological Supervision under the Ministry of Health of the Kyrgyz Republic carried out work on sampling sludge from the oxidation ponds of the WWTPs in Karakol and Balykchy and the SSP of Ak-Suu District Water Management Department to analyze for the content of heavy metals, toxicity and pathogenic microorganisms. On December 2, 2021, the DSC submitted to the PMO a draft Evaluation Report for Sludge Analysis Results (the Evaluation Report), which on December 6, 2021 was submitted to the ADB for review and approval. The DSC started updating of the earlier prepared Sludge Management Program (SMP) and submitted it to the PMO for review in the first Quarter of 2022. Later, upon request by ADB and PMO, some other alternative solutions have been studied by DSC and alternative proposal has been submitted for review which is under review of ADB.

IEE Update

41. Initial Environmental Examination (IEE) has been prepared in accordance with ADB’s Safeguard Policy Statement of June 2009 (SPS 2009), the Kyrgyz Republic’s Law on Environmental Protection, 1999, and other relevant laws, regulations and requirements.

42. The objective of the IEE is to (i) identify and assess potential impacts and risks from project implementation on the physical, biological, physical cultural and socio-economic environments of the project area, and (ii)recommend measures to avoid, mitigate and provide compensation for adverse impacts, while enhancing positive impacts.

43. During the project implementation, it was decided to update IEE and divide into two separate documents for Balykchy and Karakol each; the IEE for Balykchy to be updated by DSC while Karakol IEE shall be updated by the Contractor of Karakol WWTP. Meetings were held with ADB in April and May 2022 for updating Balykchy IEE and defining of its scope. The updated draft IEE for Balykchy was sent to PMO on October 21, 2022 to be submitted to ADB for approval.

2.2 Project Contracts and Management

44. A list of main organizations involved in the project and relating to Environmental Safeguards is given Table 2- and illustrated at Figure2-3 Organogram of Environmental Safeguards of IWMP. It includes names of borrower, executing agency and Design and Supervision Consultant of IWMP and names and contact details of environmental staff of PMO and DSC and contractors.

Table 2-1 Environmental Safeguards of IWMP

Borrower	Ministry of Finance of the Kyrgyz Republic
Executing Agency	Issyk-Kul Wastewater Management Project under Department of Construction and Engineering Infrastructure
	Project Management Office (PMO)
PMO Environmental Specialist	Mr. Kylychbek Zhundubaev
e-mail:	environmental@iwmp.kg
Tel:	+ 996 554 66 54 55
Design and Supervision Consultant (DSC)	
Organization:	Temelsu International Engineering Services Inc
DSC International Environmental Specialist	Vacant, waiting for approval
e-mail:	
Tel:	
DSC National Environmental Specialist:	Mrs. Olga Zinina

e-mail:	zinola@yandex.ru
Tel:	+60 532 644 70 28
Contractors	
Impulse-Osh Ltd.	Contractor for Lot-1 in Balykchy
Chief Engineer	B. Latikhanov
e-mail:	impuls_osh@mail.ru
Tel:	+996778566565
Quality Engineer	Bekmamat Japiev
e-mail:	impuls_osh@mail.ru
Tel:	+996558060623
Health, Safety & Environment Staff	Bekmamat Japiev
e-mail:	impuls_osh@mail.ru
Tel:	+996556032121
Profit Express Ltd.	Contractor for Lot-2 in Balykchy.
Chief Engineer	Urmat Beishenaliev
e-mail:	Urmat_beishenaliev1983@mail.ru
Tel:	+996703333421
Quality Engineer (or other position)	Aman Akunov
e-mail:	Akunov_84@mail.ru
Tel:	+996709501117
Health, Safety & Environment Staff	Zhyldyz Moldosanova
e-mail:	profit-express@mail.ru
Tel:	+996312973075
Minur LLC	Contractor for Lot-1 in Karakol
Site supervisor	Samatbek Kaldybaevich Jakypbekov
e-mail:	minur2007@mail.ru

Tel:	+996702649633
Foreman	Kanatbek Toktogonovich Mamyrbaev
e-mail:	minur2007@mail.ru
Tel:	+996702255118
Health, Safety & Environment Staff	Bekzat Shergazievich Dadybaev
e-mail:	dadybaev.b@mail.ru
Tel:	+996700376283
Consortium of Inzhenernaya Zashchita Ltd and Polymer Snab Ltd.	Contractor for Lot-2 in Karakol
Project Manager	M. Ikramov
e-mail:	injen_z@mail.ru
Tel:	+996556 566 665
Foreman	B. N. Kozhomkulov
e-mail:	injen_z@mail.ru
Tel:	
Health, Safety & Environment Staff	Bakyt Urmanbetov
e-mail:	Urmanbetov.b.kg@mail.com
Tel:	+996508080300
Consortium of Contractor CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture	Contractor for Balykchy WWTP
Project Manager	Yu Zhiping +996770445355
Chief Civil Engineer	Beishenbai Zhanboev +996504100125

Health and Safety Staff	Yuan Anfeng +996774415210
Surveyor	Feng Longlong +996508425999
Construction Engineer	Chen Jian +996507118520
Environmental Engineer	Rakat Kysanov +996707659153, kysanov68@mail.ru

45. The following organizations and/or staff responsible for environmental monitoring and/or supervision during the design and construction:

    a. PMO Environmental Specialist

    b. International and National Environmental Specialists of DSC

    c. Contractor's environmental managers and/or environmental and safety officer responsible for environmental protection issues

    d. Authorized state bodies and their territorial divisions: State Agency of Architecture, Construction and Housing and Communal Services under the Cabinet of Ministers of the Kyrgyz Republic (SAACCHS), Department of Drinking Water Supply and Sewerage Development under the State Agency of Architecture, Construction and Housing and Communal Services under the Cabinet of Ministers of the Kyrgyz Republic (DDWSSD), Project Implementation Offices in Karakol and Balykchy (PIO), Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic (MNRETS), Department for Disease Prevention and State Sanitary and Epidemiological Control and the Karakol Interdistrict Center for Disease Prevention and State Sanitary and Epidemiological Control under the Ministry of Health KR (MoH), Ministry of Culture, Information, Sports and Youth Policy (MCISYP), Ministry of Emergency Situations (MES), Ministry of Agriculture (MOA) and others.

46. Contractor and its EHS staff are responsible for preparation and implementation of SEMP.

47. International and National Environmental Specialists of DSC undertakes the technical oversight for the delivery of all safeguard measures, ensures that EMP mitigation and monitoring measures implemented, and compliance reporting completed.

48. The PMO and PMO Environmental Specialist carries out overall coordination, monitoring and control to ensure Contractors' compliance with the norms and requirements of the national environmental legislation, the ADB's Safeguards Policy Statement and prepare analytical documents and reports.

49. DSC International Environmental Specialist and DSC National Environmental Specialist (Mrs. Olga Zinina) assist the PMO Environmental Protection Specialist in coordinating and overseeing design, construction supervision and monitoring activities under the Project based on the contract.

50. HSE Engineers of Contractors carry out the activities stipulated in SSEMPs, monitoring and control to ensure Contractors' compliance with the norms and requirements of national environmental legislation and ADB Safeguards Policy.

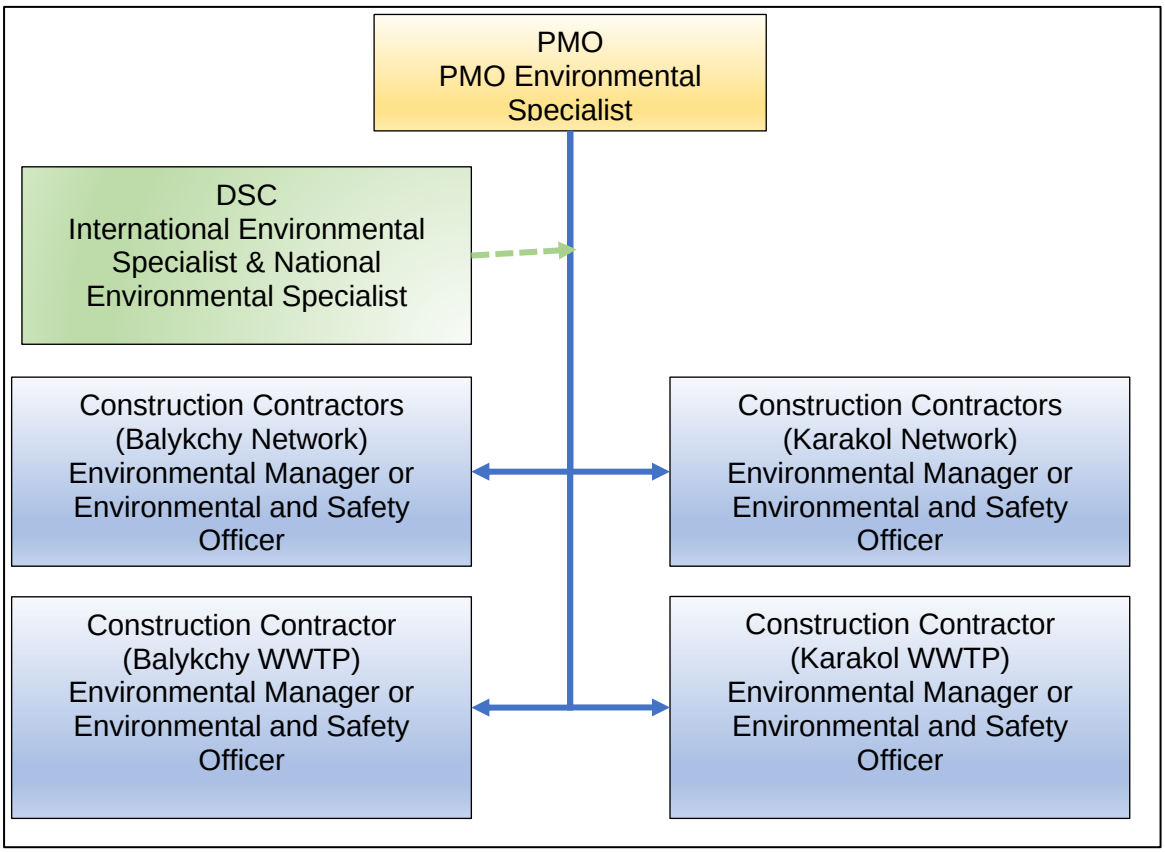


Figure2-3 Organogram of Environmental Safeguards of IWMP

2.3 Project Activities During Current Reporting Period

2.3.1. Extension of Balykchy and Karakol Sewerage Networks

51. After signing a contract agreement on January 21, 2022, the Environmental Specialist of Impulse-Osh Ltd. prepared SSEMP which has been reviewed by DSC and approved by PMO. In April, upon receipt of building permit, the company mobilized and began construction work. During the reporting period, for Lot 1 (5.34 km), the Contractor Impulse-Osh Ltd. performed construction and installation works on laying polyethylene pipes with a length of 5103 m. (95.68%). Implementation of the construction and installation works is around 85%.

52. After signing a contract agreement on February 1, 2022, a specialist of Profit Express Ltd. prepared SSEMP which has been reviewed by DSC and approved by PMO. In April, upon receipt of building permit, the company mobilized and began construction work. During the reporting period, for Lot 2 (5.32 km), the Contractor Profit Express Ltd. performed construction and installation works on laying polyethylene pipes with a length of 5,332 meters (100%). Implementation of the construction and installation works is around 98%.

53. After signing a contract agreement on March 31, 2022, a specialist of Minur Ltd. prepared SSEMP which has been reviewed by DSC and approved by PMO; and upon receipt of building permit, the company mobilized and began construction work. During the reporting period, for Lot 1, the Minur Ltd. performed construction and installation works on laying polyethylene pipes with a length of 4,655 meters (69.66%). Implementation of the construction and installation works is approximately 67%. The works were suspended starting from December 10 due to weather conditions.

54. After signing a contract agreement on April 05, 2022, a specialist of the Consortium of Inzhenernaya Zashchita prepared SSEMP which has been reviewed by DSC and approved by PMO; and upon receipt of building permit, the company mobilized and began construction work. Construction and installation works have been implemented on laying polyethylene pipes with a length of 4,600 meters (76.93%). Implementation of the construction and installation works is approximately 75%.

2.3.2. Balykchy WWTP

55. During the reporting period CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture started the civil works. The PMO approved the interim SEMP agreed with ADB to the interim SEMP for construction phase of Balykchy WWTP on September 1, 2022

Summary Description of Design Solutions

56. According to the bidding documents, the year when the design level of WWTP will be reached is 2028, the design average flow is 4200 m3/day. The peak flow during the rainy season is 180 m3/h, in addition, 77 m3/day of wastewater come from the septics.

Table 2-2. Design parameters of influent

(unit.: mg/l, except for pH and water temperature)

Indicators	pH	COD	BOD 5	Suspended solids	Total Nitrogen	Ammonium Nitrogen	Total Phosphoru	Temperature of water
Designed value	6-8	493	235	320	65	32	5	7~22℃

57. At the phase of designing of the WWTP, the treatment option was adopted as Anaerobic-Anoxic-Oxic/Anaerobic-Anoxic-Oxic process A2/O), provided that the pollution load do not exceed the above standards.

58. Design Water Quality and Treatment Degree According to the requirements of the bidding documents and the main indicators of WWTP effluent quality, the tender for this facility was divided into 2 options: (i) the application of standards in the bidding documents based on the Regulations of the Kyrgyz Republic + fishery water / irrigation water quality rules; (ii) the application of standards in the bidding documents based on Directive 91/271/EEC.

59. This Directive concerns the collection, treatment and disposal of urban wastewater as well as the treatment and disposal of wastewater from certain industries. The purpose of this Directive is to protect the environment from the harmful effects of aforementioned wastewater discharges.

60. This option intends to implement standards in the bidding documents based on EC directive 91/271/EEC rules. The main quality indicators of effluents are presented in Table 2-3

Table 2-3. Main design parameters of WWTP effluents

(unit: mg/l, except for pH and water temperature)

Indicators	pH	COD	BOD5	Suspended solids	Total Nitrogen	Ammonium Nitrogen	Total Phosphorus	Temperature of water
Designed value	6-8.4	≤ 125	≤ 25	≤ 35	≤ 15	Not used	≤ 2	Not used

Removal efficiency	/	≥74,65 %	≥89,36 %	≥89,06 %	≥76, 92	/	≥60,00 %	/

61. The total area of the existing WWTP is 5.62 hectares, the capacity of WWTP is 4200 m3/day, the area is about 2.41 hectares. The design provides all WWTP facilities, as well as landscaping of the territory.

Wastewater Treatment Process:

62. Water from main collector → manhole for discharge from vacuum trucks to WWTP → regulating pool → coarse screen → sewage pump (submersible sewage pump) → fine screen → cyclonic grit → biochemical pool of improved A2O → secondary settling tank → UV disinfection channel → discharge into oxidation pond outside the plant → Chu River

Sludge Treatment Process:

63. Sludge drainage from influent regulating basin + drainage of residual sludge from the biochemical basin + drainage of sludge from the secondary settling tank → sludge drying area (PAA is added before the mud pipe mixer) → removal of the clay crust

64. Nowadays Karakol and Balykchy WWTP lagoons are used for biological final treatment of wastewater, storage of wastewater during non-irrigation period (in Balykchy) with following discharge to the irrigation pond (in Karakol).

65. The intended purpose of the lagoons after modernization of Balykchy and Karakol WWTPs is their use as an oxidation reservoir to reduce BOD concentration and remove chlorine naturally from treated wastewater, as well as a backup storage volume in case of emergencies (ES), including emergency discharge and peak discharges to regulate the hydraulic load at WWTP.

66. Since wastewater is delivered through intermittent pumping to this plant from the pump station located on Ozernaya str. A regulating pool should be installed at upstream of flow diagram, there is also 77 m3/day sludge from the septic tanks. A manhole is designed at upstream of the regulating pool to receive wastewater from the sewage truck. The maximum flow rate in the rainy season at secondary and tertiary treatment units is 180 m3/h. The master plan of the WWTP is shown in Annex 6.

67. The Contractor has corrected the non-compliances occurred during the construction (earthworks for a tank without Balykchy IEE updated and SEMP approved by EA), and Corrective Action Plan was developed.

68. The contractor performed the following construction works during the period: reinforcing works, concreting the foundations of biological tank, inlet regulating tank, screen building, final sedimentation tank, and 2 floors of administration building, and waterproofing of the foundations.

Figure 2-4 Structures of Balykchy WWTP

Figure. 2-5 Administration Building

2.3.3. Construction of a Pump Station (PS-4) at Pristan, Karakol city:

69. The subcontractor Design Institute “Kyrgyzgiprostroy” OJSC has developed the design of SPS-4 and collector from SPS-4 to SPS-2, the 2nd phase of construction which was submitted to the Architectural department for final approval is 20.11.2022. Then, it was submitted to the State Expertise and Ecological Expertise.

70. The following structures are considered for the 2nd phase of construction:

- Sewage Pump station with two submersible pumps (one - operating, one - standby).
- Emergency reservoir in metal structures with an effective volume of up to 50 m3
- Pressure collector D_u = 125 mm (D_{outer}=140 mm), length is 2.9 km.

71. The complete sewage pumping station with service pavilion is made of reinforced fiberglass and is delivered to the site complete. Modular pump station as a whole package:

- Fiberglass tank (full tank capacity is 6.63 m^3, effective volume is 0.3 m^3, emergency volume is 1.15 m^3)
- Submersible pumps

- Pump control panel
- Pavilion above the pump station with an approximate dimension of 2.5x2.5 m.

72. The pumps will work in turns in the order determined by an automatic control system.

73. Non-self-priming, single-stage centrifugal pump, designed for pumping -wastewater, process water and untreated wastewater that has not been passed through The pump is designed for occasional and continuous operation in the submerged position. The efficient SuperVor1ex impeller enables passage of long fibres and solids up to 80 mm and is suitable for wastewater with a solids content of up to 5%. The unique stainless steel clamp mounting system makes it quick and easy to remove the pump from the motor unit for maintenance and inspection.

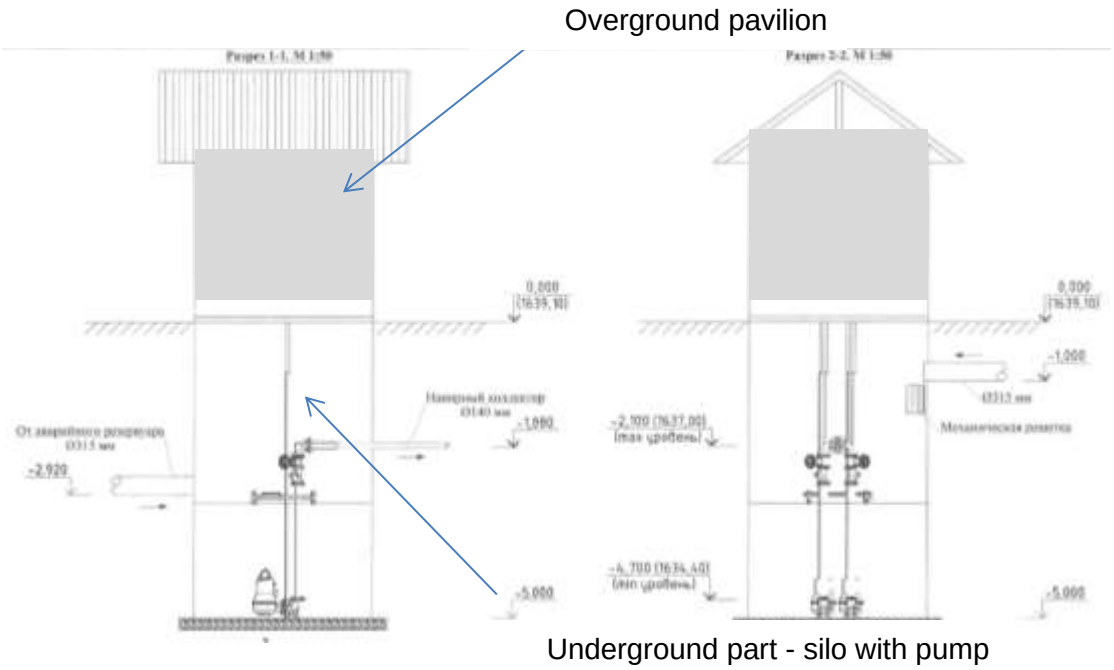


Figure 2-6 Technological Scheme of Modular SPS

74. *Technical data:*

- Current calculated consumption: 9.89 l/s
- Maximal particle size: 80 mm
- Total pump head: 36.98 m
- Maximum mounting depth: 20 m
- Power Requirement 12.5 kW

- Net weight 75 kg

2.3.5.1. Construction solutions

75. The complete sewage pumping station with service pavilion is made of reinforced fiberglass and is delivered to the site complete.

76. The pumping station is installed on a monolithic reinforced concrete slab. The tank is fixed to the foundation slab using brackets and anchor bolts.

77. In this project, a 650mm thick monolithic reinforced concrete slab made of B25 concrete was developed. The slab is reinforced with bars of classes A400 and A240.

78. Slab dimensions, reinforcement, anchor bolt diameters must be specified after selecting the pumping station components, and after specifying the weight of the pumping station.

2.3.5.2. On-site sewerage networks

79. Wastewater comes to the designed storage tank via the existing gravity-flow Ø 300 mm sewer from Pristan-Przhevalsk settlement.

80. According to the process flow, wastewater will come to the designed SPS - 4, from this station wastewater will be pumped out to SPS No. 2 through the designed pressure line collector ø140 mm.

81. In case the pumps stop, close the gate valve on the supply pipe to the station intake tank (manhole 2) and open the gate valve on the pipeline to the emergency tank (manhole 3), where the effluent will flow through the grate installed in manhole 4. The screen is cleaned of coarse particles by manually.

82. When the station resumes operation, wastewater from the emergency tank flows in Ø 315 mm pipes by gravity into the inlet tank of the SPS after opening the gate valve in manhole No. 5. The wastewater supply must be regulated with a gate valve.

83. On-site gravity sewerage networks are laid with polyethylene pipes PE 80 (technical) Ø315 mm in accordance with GOST 18599-2001 at a depth of between 0.83 m and 2.92 m. Sewer manholes have a diameter of 1.1 m and 1.5 m.

84. After completion of works on vertical leveling of the SPS site, sewer manholes No. 1,3,4 will be installed in accordance with TP 901-09-11.84 and series 3.900-3, v.7 provided for the 1st stage of construction.

2.3.5.3. Outdoor electricity networks, power supply and automation.

85. The power supply of sewage pumping station No.4 is provided by the projected on-site complete transformer substation CTS 25/6kV/0,4U1, voltage 380/220V, designed to feed the pumping station.

86. The transformer substation is connected by an overhead line with 3AS50 GOST 830-76 wire on reinforced concrete poles according to series. 3.407.1-143 from existing VL-6kV networks, feeder "Proploschadka-2", through disconnector RLND-10-400U1.

87. The route length is 0.085 km

2.3.5.4. Sewage collector from SPS-4 to SPS-2

88. According to the process flow, wastewater will come to the designed sewerage pump station No. 4, from this station wastewater will be pumped out to SPS No. 2 with the designed pressure pressure collector made of pipes ø140mm.

89. The diameter of pipeline is selected based on the throughput capacity – 30 m3/hour and the permissible wastewater flow rate - 0.7 m/s. Installation method: underground

90. The designed pressure collector to be installed with polyethylene pipes PE 80 (technical) Ø140 mm according to GOST 18599-2001 at the depth of 1.87 м - 2.64 m.

91. Sewer manholes have a diameter 1.5 m.

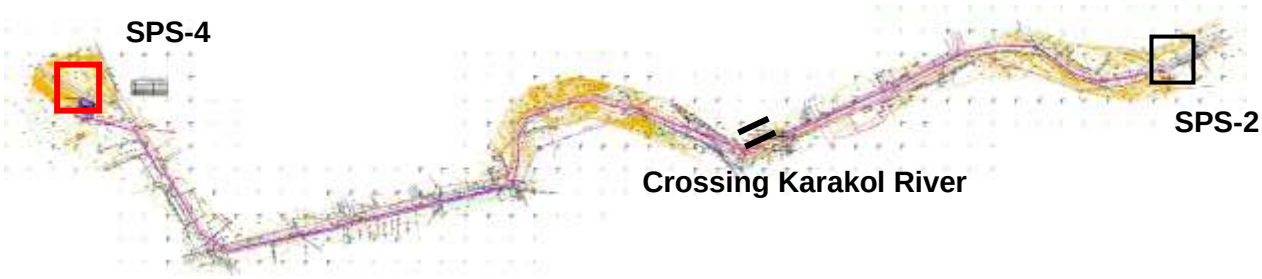


Figure 2-7. Scheme of the sewerage network

Table 2-4. Technical indicators for the sewerage collector

№№	Name of	Unit	Characteristics
1	Sewage collector from KNS-4 to KNS-2	km	2,90
2	Sewerage manholes Crossing Karakol River	pcs	3

3	Steel case at road crossings	pcs/m	1/48
4		pcs/m	2/92

2.3.5.5. Crossing of sewage collector over the Karakol River

92. The crossing of the Karakol River is designed for the passage of a sewage collector from Tr.0140 mm pipe.

93. When crossing the bridge, the sewer is laid in a steel case made of Tr.377x5 mm pipe. The steel case made of Tr. 0377x5 mm pipe is installed inside a triangular steel truss with a span of 48.0 m by means of sliding supports according to s. 4.903-10 c.5, which are supported by the shaped elements of the bottom edge of the truss with a spacing of 1500 (1425) mm and are used as supporting elements of the case for load distribution within the truss span.

94. Sliding supports are welded to the steel case and rest on the underside of the truss.

95. The steel triangular truss is the span of the bridge crossing.

96. The span structure is supported by shore supports.

97. The Karakol River crossing for the sewage collector includes the following structural elements:

- Support No. 1 on the bank;
- Support No. 2 on the bank;
- The span is a triangular metal truss with a span of 48.0 meters.

98. Span is located 290-300 mm (to be specified on site) higher than two existing steel pipes SPS 0400 mm from the mark of the bottom of the truss flange connection.

99. The bank supports are custom designed as solid reinforced concrete.

100. Concrete class B25 W8 F200. Reinforcement A500c, A240 according to GOST 34028-2016.

101. The supports on bank are installed on a layer-compacted gravel-pebble bed placed on a layer of rubble stone compacted into the soil. The stone layer thickness is 1.0 m.

102. The base course must be compacted to a depth of 1.0 m with a compaction factor of Kup.=0.95 before the rubble stone laying layer starts.

103. The ground pad is made according to the "Measures for the construction of the ground pad".

104. Concrete surfaces in contact with the ground are coated with hot bitumen two times.

105. The backfill soil is a layer-by-layer compacted pebble soil. Compaction layer thickness 200 mm. Compaction factor CF.=0.95.

106. Pebble soils with organic inclusions and clay aggregate are not permitted. Dewatering of the excavation is a separate project.

107. To pass the sewage collector in the body of the shore supports to lay metal sleeves. Individually designed steel triangular truss with a span of 48.0 m

108. The section “Environmental protection” as a part of the design and estimate documentation was submitted for state ecological expertise. The results have not been issued yet.

2.4 Construction

2.4.1. Sewerage Networks Balykchy

109. **Lot 1 "Western section**": Togolok Moldo Mambetaliev st. Kaldybaeva St., total length 5.34 km)”. Construction is being carried out by Impulse-Osh Ltd. During the reporting period the Contractor Impulse-Osh Ltd. performed construction and installation works on laying polyethylene pipes with a length of 5,103 meters (95.68% of total) for Lot 1. Implementation of the construction and installation works is around 86%.

Table 2-5. Main indicators of Impulse Osh sewerage networks.

Sections		Length, m	Crossings, nos.	Manholes, D 1.5m, pcs.
No.	Names	pipes D150 – 400 mm		
1	Togolok Moldo st.	2,103 m	22	86
2	Mambetaliev st.	2,592 m	20	98
3	Ozyornaya St.	325 m		7
	Total	**5,334**	**42**	**184**

110. There are trees along the sewerage lines that will be affected by civil works during construction. The preliminary estimated number of trees to be cut is 7 (3 nos. on Togolok Moldo Str and 4 nos on Mambetaliev Str). During the current period, the Contractor together with ME Zelenkhoz cut trees on Mabetalieva Street. Trees were not cut on Togolok Moldo street. Occupational Health and Safety Specialist is Bekmamat Zhapiev.

111. Sewer networks are designed to ensure discharge of wastewater from town blocks to the municipal sewer collector on Ozernaya street and SPS. Domestic wastewater flows in the designed pipelines made of corrugated HDPE pipes D150-400 mm from inlet manholes to tie-in points into the existing sewerage network. The sewerage networks are designed in

accordance with hydraulic calculations, to ensure the passage of the total estimated flow rate of wastewater from the block developments adjacent to the sewer network, and with the slopes of the pipelines along the route, determined based on the permissible flow rates, taking into account the natural terrain. ACM has not been used/moved and disposed of during construction work.

112. The routes are designed along the roadway and along street sections, the pipelines will be laid underground by an "open method" with shoring of the trench walls to avoid any collapse. The EMP are developed and included into the bidding documents.

113. Along the routes of the networks, it is envisaged to install control reinforced concrete manholes with D1.5 m with H operating part = 1- 2.5m, with tray elements H = 3.0-2.4m, complete with necks and hatches. In order to ensure the collection of sewage from both sides of the streets, as well as at the intersection points of cross streets and at the points where the route changes its direction, observation manholes and organized crossings over the roads with the placement of modular observation manholes were designed.

114. The routes are designed along the roadways of streets and along street sections, by an "open method" underground laying at a laying depth of 1.77 to 3.5 m. Sewerage networks intersect with existing communications, which causes complications, due to which the device of transition structures is provided.

Figure 2-8 Construction site of Impulse Osh Ltd.

115. **Lot 2 "Eastern"** (Toktosunova St., Sharopiva St., Kaldybaeva St. with a total length of 5.33 km). Construction is being carried out by Profit Express Ltd. During the reporting period, for Lot 2, the Contractor Profit Express Ltd. performed construction and installation works on laying polyethylene pipes with a length of 5,400 meters. Implementation of the construction and installation works is almost around 98%.

116. During the reporting period, the Contractor together with ME Zelenokhoz cut trees. The number of trees falling under the "necessary cutting" is 28 trees (3 trees on Toktosunov Street, 20 trees on Sharipov Street and 5 trees on Kaldybaeva Street). According to the contract, trees will be planted in the spring to replace those that were cut down. Occupational Health and Safety Specialist is Aman Muktarbekovich Akunov.

Table 2-6 Main indicators for sewerage networks of Profit Express

№	Name of sections	pipes length, D200 m	Crossings, nos.	Manholes, pcs.
1	Toktosunov st.	713	9	23
2	Sharipov st.	2,586	24	85
3	Kaldybaev st.	2,033	22	69
4	**Additional line to school**	**68**	**0**	**2**
	Total	**5,400**	**55**	**179**

117. Sewer networks are designed to ensure discharge of wastewater from town blocks to the municipal sewer collector on Ozernaya street and SPS. Domestic wastewater flows in the designed pipelines made of corrugated HDPE pipes D150-400 mm from inlet manholes to tie-in points into the existing sewerage network. The sewerage networks are designed in accordance with hydraulic calculations, to ensure the passage of the total estimated flow rate of wastewater from the block developments adjacent to the sewer network, and with the slopes of the pipelines along the route, determined based on the permissible flow rates, taking into account the natural terrain. ACM has not been used/moved and disposed of during construction work.

118. The routes are designed along the roadway and along street sections, the pipelines will be laid underground by an "open method" with shoring of the trench walls to avoid any collapse.

119. Along the routes of the networks, it is envisaged to install control reinforced concrete manholes with D1.5 m with H operating part = 1- 2.5m, with tray elements H = 3.0-2.4m, complete with necks and hatches. In order to ensure the collection of sewage from both sides of the streets, as well as at the intersection points of cross streets and at the points where the route changes its direction, observation manholes and organized crossings over the roads with the placement of modular observation manholes were designed.

120. The routes are designed along the roadways of streets and along street sections, by an "open method" underground laying at a laying depth of 1.77 to 3.5 m. Sewerage networks intersect with existing communications, which causes complications, due to which the device of transition structures is provided.

121. Sewer networks are designed to ensure discharge of wastewater from town blocks to the municipal sewer collector on Ozernaya street and SPS. Domestic wastewater flows in the designed pipelines made of corrugated HDPE pipes D150-400 mm from inlet manholes to tie-in points into the existing sewerage network. The sewerage networks are designed in accordance with hydraulic calculations, to ensure the passage of the total estimated flow rate of wastewater from the block developments adjacent to the sewer network, and with the slopes of the pipelines along the route, determined based on the permissible flow rates, taking into account the natural terrain. ACM has not been used/moved and disposed of during construction work.

122. The routes are designed along the roadway and along street sections, the pipelines will be laid underground by an "open method" with shoring of the trench walls to avoid any collapse. The EMP are developed and included into the bidding documents.

123. Along the routes of the networks, it is envisaged to install control reinforced concrete manholes with D1.5 m with H operating part = 2- 3.5m, with tray elements H = 0.2-0.4m, complete with necks and hatches. In order to ensure the collection of sewage from both sides of the streets, as well as at the intersection points of cross streets and at the points where the route changes its direction, observation manholes and organized crossings over the roads with the placement of modular observation manholes were designed.

124. The routes are designed to be laid underground along the roadways and street sections by an "open method" at a depth of 1.7 to 77.5 m. Sewerage networks intersect with existing communications, which causes complications, due to which the device of transition structures is provided.

Figure 2-9 Construction site of Profit Express Ltd.

2.4.2 Sewerage Networks in Karakol

125. **Lot 1 "Southern section"**(Lot comprises Section №1 - Akhunbaev str. between Lenin str. and Moskovskaya str.; Section №2 – Duisheyeva str. between Zhusaeva str. and Moskovskaya; Section № 3 – Moskovskaya str. between Akhunbaeva and Oktyabrskaya str. (total length is 6.72 km). Construction is being carried out by Minur Ltd. The Contractor installed polyethylene pipes with a length of 4,655 meters. Implementation of the construction and installation works is approximately 67%.

126. Also ME Zelenokhoz of Karakol jointly with representatives of Minur Ltd. carried out the planned cutting of trees, the amount of which was 10 shrubs and one poplar, also two spruces were replanted.

Table 2-7. Main indicators for sewerage networks of Minur Ltd.

№	Name of sections	Length, m	
		pipes D200mm	pipes D150mm
1	Gebze str.	381	13
2	Alybakov srt. (Section 1)	416	24
3	Akhunbaeva str.	977	120
4	Zhamansariev str.	397	69

5	Abdurakhmanov str.	403	26
6	Moskovskaya str.	1,365	188
7	Lenin str.	394	35
8	Duisheev str.	655	23
9	Alybakov str. (Section 2)	349	61
10	Abdurakhmanov str. (Section 2)	350	44
11	Gebze str. (Section 2)	392	36
	Total	**6,079**	**639**

127. Taking into account the building density of city streets and their dimensions, the gravity sewer network of each street is designed on one side of the street.

128. For the sewerage of the other side of the street, along the sewerage routes, organized crossings to the other side of the street with the placement of prefabricated wells are provided. When choosing a route, the existing underground and ground engineering networks that are located on the streets were taken into account. In addition, project materials of the networks to be built on these streets have been studied.

129. Sewer networks are designed to discharge water from residential buildings to the municipal WWTP. Domestic wastewater flows in the designed pipelines made of corrugated HDPE pipes D150-300 mm from inlet manholes to tie-in points into the existing sewerage network. The sewerage networks are designed in accordance with hydraulic calculations, to ensure the passage of the total estimated flow rate of wastewater from the block developments adjacent to the sewer network, and with the slopes of the pipelines along the route, determined based on the permissible flow rates, taking into account the natural terrain. Along the routes of the networks, it is envisaged to install control reinforced concrete manholes with D1.5 m when H operating part = 1.4 - 4.5 m, with tray elements H = 0.2 - 0.4m, complete with necks and hatches. In order to ensure the collection of sewage from both sides of the streets, as well as at the intersection points of cross streets and at the points where the route changes its direction, observation manholes and organized crossings over the roads with the placement of modular observation manholes were designed. ACM has not been used/moved and disposed of during construction work.

130. The municipal gravity sewer network is designed to be constructed from NDPE Korsis corrugated sewer pipes, with the smallest diameter of 200 mm for a street network

(according to SNiP 2.04.03-85 "Sewerage. External networks and structures". clause 2.33). Detailed diameters of pipelines are indicated in the drawings.

131. The slopes of the pipelines along the route were determined based on the terrain and on the basis of the permissible flow rates of wastewater, as well as taking into account the location of other underground utilities and standard slopes.

132. The calculated filling in the pipelines of the domestic sewage system, according to SNiP 2.04.03-85 "Sewerage. External networks and structures" clause 2.40, is taken not more than 0.7 of the pipeline diameters.

133. The depth of the sewerage network must ensure that all subscribers living in the neighborhood are connected. The average depth accepted for laying the sewerage network is up to 3 meters.

134. There are sewer manholes made of precast reinforced concrete rings with a diameter of 1.0 m and 1.5 m on the sewerage route.

135. Inspection manholes for the designed network are provided at the junctions of cross streets, in places where the route direction changes, as well as changes in the slopes and diameter of the pipeline. The manholes are covered with cast-iron hatches, 700 mm in diameter, with removable covers.

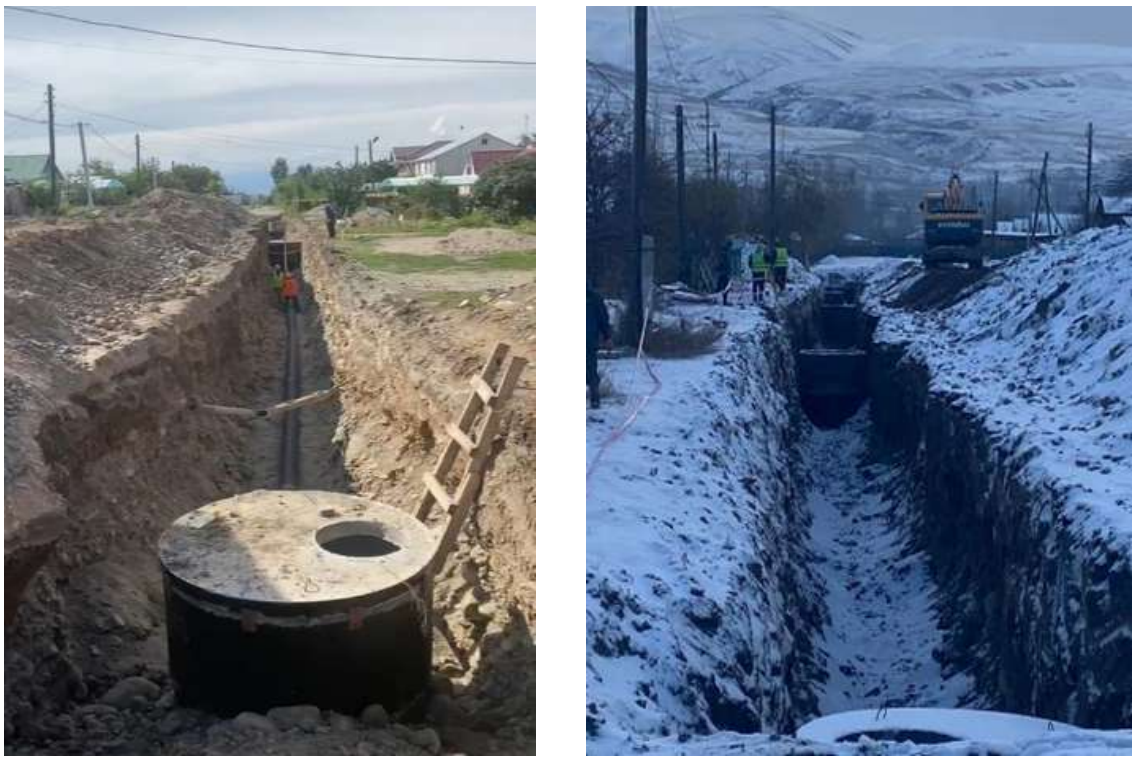


Figure 2-10 Construction site of Minur Ltd.

136. **Lot 2 "Northern Section"** (Lot comprises section No.4 - Octyabrskaya str. between Gebze and Kuchukova streets, section No. 2 - Zhusaeva street between Przhevalsky street and Shorukova street) with a total length of 5.98 km). Construction is carried out by a consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd. During the reporting period , the Contractor installed polyethylene pipes with a length of 4,600 meters. Implementation of the construction and installation works is around 75%. Trees have not been cut in the current period. The Environmental Engineer is Kuttuz Makhamadjanovich Ikramov.

Table 2-8. Main indicators for sewerage networks of the consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd.

No	Name of sections	Length, m			
		pipes D300mm	pipes D200mm	pipes D250mm	pipes D150mm
1	Oktyabrskiystr.	698.5	-	408	25
2	Asanaliev str.	-	343	-	20.5
3	Tumanov str.	-	348	-	32
4	Kadyrov str.	-	350.5	-	21
5	Sovetskaya str.	355		-	
6	Isa Kuchukov str.	218	386	-	25
7	Section 5.	-	2,685.5	-	64
	Total	**1,271.5**	**4,113**	**408**	**187.5**

137. Taking into account the building density of city streets and their dimensions, the gravity sewer network of each street is designed on one side of the street.

138. For the sewerage of the other side of the street, along the sewerage routes, organized crossings to the other side of the street with the placement of prefabricated wells are provided. In addition, project materials of the networks to be built on these streets have been studied.

139. Sewer networks are designed to discharge water from residential buildings to the municipal WWTP. Domestic wastewater flows in the designed pipelines made of corrugated HDPE pipes D150-300 mm from inlet manholes to tie-in points into the existing sewerage network. The sewerage networks are designed in accordance with hydraulic calculations, to ensure the passage of the total estimated flow rate of wastewater from the block developments adjacent to the sewer network, and with the slopes of the pipelines along the route, determined based on the permissible flow rates, taking into account the natural terrain.

140. Along the routes of the networks, it is envisaged to install control reinforced concrete manholes with D1.5 m when H operating part = 1.4 - 4.5 m, with tray elements H = 0.2 - 0.4m, complete with necks and hatches. In order to ensure the collection of sewage from both sides of the streets, as well as at the intersection points of cross streets and at the points where the route changes its direction, observation manholes and organized crossings over the roads with the placement of modular observation manholes were designed. ACM has not been used/moved and disposed of during construction work.

141. The municipal gravity sewer network is designed to be constructed from NDPE Korsis corrugated sewer pipes, with the smallest diameter of 200 mm for a street network (according to SNiP 2.04.03-85 "Sewerage. External networks and structures". **Para 2.33.** Detailed diameters of pipelines are indicated in the drawings.

142. The slopes of the pipelines along the route were determined based on the terrain and on the basis of the permissible flow rates of wastewater, as well as taking into account the location of other underground utilities and standard slopes.

143. The calculated filling in the pipelines of the domestic sewage system, according to SNiP 2.04.03-85 "Sewerage. External networks and structures" clause 2.40, is taken not more than 0.7 of the pipeline diameters.

144. The depth of the sewerage network must ensure that all subscribers living in the neighborhood are connected. The average depth accepted for laying the sewerage network is up to 3 meters.

145. There are sewer manholes made of precast reinforced concrete rings with a diameter of 1.0 m and 1.5 m on the sewerage route.

146. Inspection manholes for the designed network are provided at the junctions of cross streets, in places where the route direction changes, as well as changes in the slopes and diameter of the pipeline. The manholes are covered with cast-iron hatches, 700 mm in diameter, with removable covers.

Figure 2-11 Construction site of the consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd.

2.4.3 Balykchy WWTP Reconstruction

147. During the reporting period the consortium of CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture started the civil works in September 2022 upon the approval of interim SEMP for Balykchy WWTP construction phase..

148. Construction work took place from September to December. In December, the work is temporary and depends on weather conditions.

Figure 2-12 Construction site of WWTP

Table 2-9. List and Volume of Civil Works.

Type of works	Buildings and facilities	Unit	Quantity
Earthworks	SPS	m³	2100
Concrete Works	Biologic tank	m³	910
	Regulating tank	m³	430
	Screens and SPS Facility	m³	65
	Sedimentation Tank	m³	380
	Administration building	m³	148
	Mechanical workshop	m³	76
	Fence	m³	10
Insulation works	Foundation	kg	1000.0

2.5 Description of Any Changes to Project Design

149. The design documentation has not been changed during the reporting period.

2.5.1. Description of Any Changes to Agreed Construction methods

150. There is no any change up to present.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1. General Description of Environmental Safeguard Activities

3.1.1 Expansion of Sewer Network in Balykchy and Karakol

151. During the construction of sewage networks in Balykchy and Karakol Environmental specialists of the contractors daily performed the following activities:

- Check the availability of PPE, first aid kit, bio-toilet before the start of works;
- Fill in check lists for monitoring of environmental impact;
- Beforehand inform the households adjacent to the construction site about the work implementation. Conducts a conversation about the dangers of being near open trenches;
- If necessary, inform about road closure for construction work implementation;
- Monitors the need for dust suppression;
- Provides fencing of construction site, warning tape

3.1.2 Construction of Balykchy WWTP

152. The PMO obtained the approval of ADB to the interim SSEMP for construction phase of Balykchy WWTP on September 1, 2022. After that, construction work on Balykchy WWTP was resumed. Concrete and waterproofing works were carried out during the reporting period.

153. During the construction of Balykchy WWTP Environmental specialist of the contractor performs the following activities:

- Check the availability of PPE, first aid kit, sanitizer before the start of works;
- Fill in check lists for monitoring of environmental impact;
- Monitors the need for dust suppression;
- Provides fencing of construction site, warning tape
- Supervises the proper condition of rooms for the accommodation of workers, the availability of good hygienic and living conditions for which the contractor was given an NCN and corrective action plan was instructed;
- Supervises the implementation / utilization of safety and environmental measures/means, the SSEMP.

3.1.3 Sludge Management Plan

154. The DSC started updating of the earlier prepared Sludge Management Program (SMP) and submitted it to the PMO for review in the first Quarter of 2022. The Sludge Management Plan was submitted for ADB's review on October 26, 2022 after finalization based on comments and remarks given for SMP.

3.1.4. Construction of a Pump Station (PS-4) at Pristan, Karakol city.

155. Section "Environmental protection" was developed as a part of the design and estimate documentation during the reporting period, which is currently under ecological state expertise's review. The OVOS report is also updated to include Phase-2 of the construction of SPS in Pristan-Przhevalsk. Public Participation Meetings for Phase-1 of the construction was conducted in the previous reporting period.

3.1.5. Update of Initial Environmental Examination Report for Balykchy

156. In the reporting period, the DSC conducted work on Balykchy IEE updating. Now the IEE is under review of ADB.

3.1.6. Update of the Initial Environmental Evaluation for Pristan-Przhevalsk.

157. During the reporting period the works started on updating the IEE for Pristan-Przhevalsk, which include the additional work, namely the reconstruction of the discharge pipeline (0.2 km) from the WWTP and the capital repair of 28 manholes on the collector that delivers wastewater to the WWTP. The update is carried out by the DSC planned to be completed by March 2023 after approval of conceptual design and finalization of detailed design..

3.2. Site Audits

158. The construction sites are audited by DSC National Environmental Specialist to check the compliance with measures specified in the SSEMP.

159. The DSC's National Environmental Specialist O.V. Zinina visited the construction sites of sewer networks in Balykchy on July 20, August 4, September 15, October 26, November 24, 2022. As the construction works has stopped by beginning of December due to winter conditions, no visit was done in December.

160. The DSC's National Environmental Specialist O.V. Zinina visited the construction site of Balykchy WWTP on July 20, August 4, September 15, October 26, November 24, 2022. Non-compliances detected in the previous report period were corrected from July to August. The civil works started in September. Non-compliance detected in end September and in October again is still open and contractor promised to comply with the corrective action instructions before the end of January.

161. The DSC's National Environmental Specialist O.V. Zinina visited the construction sites of sewer networks in Karakol on July 21, August 5, September 16, October 27, November 25, 2022.

162. Details of the WWTP and network construction site visits and findings of non-compliances are presented in Table 3-1.

163. The construction activities has started (on site) for networks of Balykchy in March and in April for Karakol; Balykchy WWTP started in September. Five monitoring visits (by one for each site) were conducted within the mentioned period.

Table 3-1. Audit of sites (Non Compliances Tracking by DSC ES)

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
1	Lot1 NW Karakol (PE Minur LLC)	05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.	N6	N/A	12.08.22	Low	Site Manager	Closed	06.08.22
2	Lot1 NW Balykchy (IMPULSE OSH)	04.08.22	Safety	There is no fencing of open hatches.	Protect or close all hatches and pits that pose a danger.		Major	11.08.22	High	Contractor's Project Manager	Closed	09.08.22
3	Lot1 NW Balykchy (IMPULSE OSH)	04.08.22	Other	Excess soil is located on the site.	Remove all excess soil	N7	N/A	11.08.22	Low	Contractor's Project Manager	Closed	10.08.22
4	Lot2 NW Balykchy (PROFIT EXPRESS)	04.08.22	Safety	Workers should always wear PPE.	Provide workers with PPE and monitor their use.	N8	Minor	05.08.22	Low	Site Manager	Closed	05.08.22

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
5	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	05.08.22	Environmental Protection	Clogging of the soil with bitumen heating products	Clean up all places of contamination. To provide a platform for bitumen works, which will have a sand or soil cushion.	N9	N/A	12.08.22	Low	Site Manager	Closed	10.08.22
6		05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.		N/A	12.08.22	Low	Site Manager	Closed	06.08.22
7	Lot1 NW Karakol (PE Minur LLC)	05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.	N10	N/A	12.08.22	Low	Site Manager	Closed	06.08.22
8	WWTP Balykchy (CRBC)	15.09.22	Safety	Debris on the way to the shower and toilet.	Clear the way to the shower and toilet.	N11	Minor	16.09.22	Moderate	Site Manager	Closed	29.09.22
9	Lot1 NW Balykchy (IMPULSE OSH)	15.09.22	Environmental Protection	There is no toilet.	The toilet should always be on the construction site	N12	Minor	17.09.22	Low	Site Manager	Closed	19.09.22

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
10		15.09.22	Other	Remove excess soil	Excess soil is taken to a special site		N/A	17.09.22	Low	Site Manager	Closed	19.09.22
11	Lot1 NW Karakol (PE Minur LLC)	16.09.22	Environmental Protection	No trash cans	Garbage cans should always be on the construction site	N13	Minor	16.09.22	Low	Site Manager	Closed	19.09.22
12	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	16.09.22	Environmental Protection	Workers work without PPE	Workers should always be in a PPE on the construction site	N14	Minor	16.09.22	Low	Site Manager	Closed	19.09.22
13		16.09.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.		N/A	16.09.22	Low	Site Manager	Closed	19.09.22
14		16.09.22	Environmental Protection	There is no toilet.	Install a bio toilet on the construction site.		Minor	18.09.22	Low	Site Manager	Closed	22.09.22

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
15	WWTP Balykchy (CRBC)	28.09.22	Health	Dormitories are not in proper condition.	To bring the rooms for workers in proper condition: make the floor, bring the beds into conformity (install beds of the right length), place the necessary shelves for belongings.	N15	Major	21.10.22	High	Contractor's Project Manager	Open	
16	WWTP Balykchy (CRBC)	26.10.22	Environmental Protection	Site should be cleaned.	Remove garbage located on the site	N16	Minor	01.11.22	Low	Site Manager	Closed	29.10.22
17		26.10.22		Oil leaks	Fix oil leaks of machinery operated at WWTP, maintain construction machinery in the proper condition throughout construction works.		Minor	01.11.22	Low	Site Manager	Closed	31.10.22

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
32		26.10.22	Health	Kitchen not in hygienic conditions	Arrange a canteen in the room next to the kitchen to meet the sanitary-hygienic requirements		Major	26.11.22	High	Contractor's Project Manager	Closed	31.10.22
33	Lot1 NW Balykchy (IMPULSE OSH)	26.10.22	Environmental Protection	A portable toilet is not available.	Install a bio toilet on the construction site.	N17	Minor	03.11.22	Low	Site Manager	Closed	27.10.22
34	Lot1 NW Karakol (PE Minur LLC)	27.10.22	Environmental Protection	Portable toilet was hit by a car and is not available.	Supply a new toilet	N17	Minor	04.11.22	Low	Site Manager	Closed	28.10.22
35	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	27.10.22	Other	The information board was broken.	Provide a new board	N18	Minor	03.11.22	Low	Site Manager	Closed	01.11.22
36	Lot1 NW Balykchy (IMPULSE OSH)	24.11.22	Environmental Protection	A portable toilet is not available.	A portable toilet should be always on the site.	N19	Minor	28.11.22	Low	Site Manager	Closed	29.11.22
37	Lot 2, networks (Profit Express Ltd.)	24.11.22	Environmental Protection	A portable toilet is not available.	A portable toilet should be always on the site.	N20	Minor	27.11.22	Low	Site Manager	Closed	28.11.22

№	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Delivery Date	Priority	Responsible	Status	Date Closed
38	Lot1 NW Karakol (PE Minur LLC)	25.11.22	Other	There is no information board.	The broken board should be reinstated.	N21	Minor	28.11.22	Low	Site Manager	Closed	28.11.22
39	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	25.11.22	Other	The cover does not correspond to the content Occupational Health and Safety Logs.	Occupational Health and Safety Log to be updated.	N22	Minor	27.11.22	Low	Site Manager	Closed	28.11.22
40	WWTP Balykchy (CRBC)	24.11.22	Environmental Protection	There are construction debris and household waste on the site.	All debris should be removed.	N23	Minor	28.11.22	Low	Site Manager	Closed	28.11.22

3.3. Issues Tracking (Based on Non-Conformance Notices)

164. During the reporting period, construction work was carried out on sewage networks in Balykchy and Karakol.
165. WWTP modernization commenced in September upon approval of the SEMP.
166. Non-Conformity Tracking Report related to site audits is enclosed in appendix II.
167. Additionally, the summary of monitoring results are given in the following tables:

Table 3-2. Summary Table

Total Number of Issues for Project	38
Number of Open Issues	1
Number of Closed Issues	37
Percentage Closed	97%
Issues Opened This Reporting Period	27
Issues Closed This Reporting Period	26

Issues Closed On Time	21
Percentage by Closed Issues	57%
Percentage by Open Issues	43%

Average Day Open For All Issues	71
Average Day Open For Open Issues	142
Average Days to close	10

Table 3-3 Issues by Category

Environment	14
Social	0
Health	8
Safety	5
Other	11

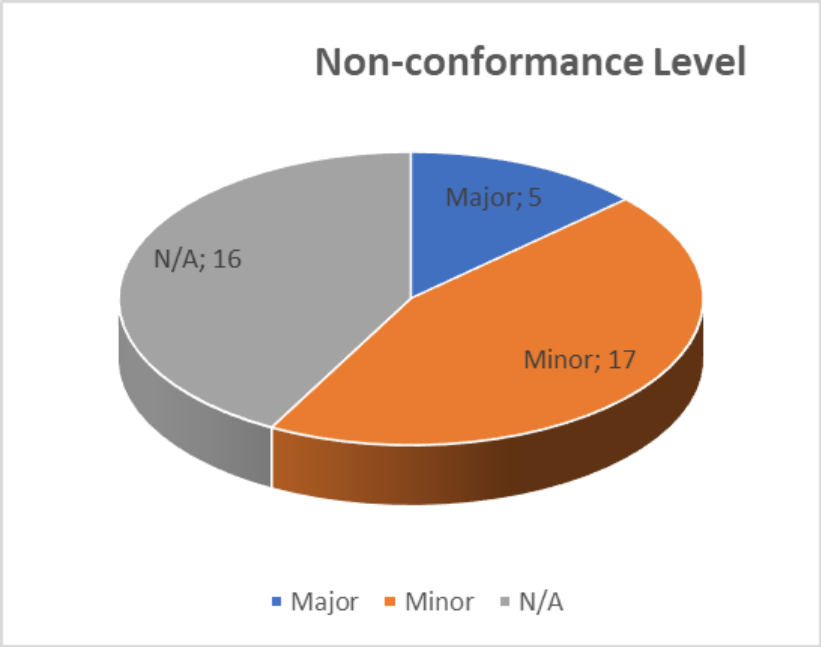


Figure 3-1. Chart of Non-compliance Notifications.
N/A: Not formal Non-conformance

3.4. Trends

168. Comparison of previous and current period Non-compliance issues is given in Table 3-4 below:

Table 3-4 Comparison of trends

Semi-Annual Report No	Total No of Issues	% issues Closed	% issues closed late
5	11	9	1
6	27	26	15

169. Works on site cannot be started before approval of SSEMP as mentioned on site visit of the Safeguards Review Mission on 29.06.2022.

170. The works should be implemented in accordance with IEE, EMP, SEMP, local permits, and environmental checklists.

171. The training on environmental, health and safety requirements of the SSEMP was conducted by DSC ES before the start of construction works (the training was covered in more detail in the 5th semi-annual report).

172. According to the information of Table 3-4, the main incompliances were caused by insufficient arrangements for of activities specified in the SSEMP. To reduce the number of incompliances, additional training on the measures provided in the SSEMP is required not only for the engineering staff, but also for the workers perhaps also by participation of DSC Specialist.

173. Frequency of visits of DSC specialist to construction sites will increase the identification and elimination of possible incompliances with the developed SSEMP.

3.5. Unanticipated Environmental Impacts or Risks

174. In the current period, no any unanticipated Environmental impacts or risks have been encountered or identified

4. ENVIRONMENTAL MONITORING RESULTS

4.1. Overview of Monitoring Conducted during Current Period

4.1.1 Air Quality

175. The main type of pollutant during construction of sewerage network and WWTP in Balykchy is inorganic dust, which is generated during excavation work. Dust suppression is used to minimize this type of contamination.

176. Also, during construction work, exhaust gases are emitted when construction equipment is in operation. The composition of exhaust gases is a mixture of nitrogen oxides, sulfur, carbon, soot and hydrocarbons. However, as the general excavation works have been almost completed in Balychy, presently operation of construction equipment is very rare.

177. Daily visual air quality monitoring is conducted at the construction site. (Monitoring reports are presented in Appendix 2) and noise measurement with an mobile app.

178. The SSEMP for Balykchy and Karakol networks and Balykchy WWTP provides instrumental monitoring of air pollution and noise levels.

179. Air quality has not been measured with instruments. The DSC will step up this work. By the start of work (spring 2023), all contractors will be advised to conclude a contract with the laboratory of the Department of Environmental Monitoring under the MNRETS

Table 4-1 Review of Laboratories

Name of the Local Laboratories	Location	Accreditation	Notes
Laboratory Under Issyk-Kul Territorial Dep. of State Agency for Environment and Forestry	Cholpon-Ata	Not available	Air tests are not available.
Central Lab. under Department of Disease Prevention and State Sanitary and Epidemiological Surveillance	Bishkek city	**Not available**	Air tests are not available.
State Enterprise "Central Laboratory" (SE CL) under the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic (MNRETS KR).	Bishkek city	Available	Air tests are not available.
Stewart Assay & Env. Lab. LLC	Karabalta	Not available	Laboratory staff does not go to fields due to heavy workload.
Laboratory of the Department of Environmental Monitoring under the MNRETS.	Bishkek	Available	Air tests are available.

180. Nearby residents did not complain on air quality.

4.1.2 Noise and Vibration

181. The main source of noise during installation is construction equipment. The works are executed from 9.00 to 17.00, i.e. during the working day. Personal requests from residents regarding the timing of noisy activities were taken into account. Noise was measured by the application of the cell phone.

182. Nearby residents did not complain on noise and vibration.

4.2. Trends

183. During the reporting period the contractors faced the difficulties related to air instrumental monitoring The monitoring was carried out only visually. However, the SSEMP provided air instrumental monitoring. To confirm that there is no negative impact, additional consultation and/or required support is needed prior to the commencement of construction work to contract a laboratory for instrumental measurements of air quality, noise and, if necessary, soil.

4.3. Summary of Monitoring Outcomes

184. At construction sites, the Environmental Engineers conduct daily visual monitoring and keep records of excess soil, as well as generated solid domestic wastes.

185. Bio-toilets, trash bins and bridges for trench crossing are available on the sites or at least provided after warning and issuing NCNs. There is a first aid kit and a sanitizer.

186. Safety briefings are conducted regularly.

187. During the observation period, no significant signs of negative environmental impact were identified. A number of visits may need to be increased when the works are resumed.

4.4. Material Resources Utilization

188. Construction work involves a significant use of material resources. The main resources are:

- Electricity
- Water

189. The main resources that were used in the construction is water. Water is used for domestic, hygienic and technical (dust suppression) purposes. Water is supplied under a contract with Balykchy and Karakol Vodokanals.

Table 4-2. Consumed material resources

Name of Contractor	Electricity for the reporting period, kW/h	Water for the reporting period, m3
1	2	3
Impulse-Osh Ltd.	300	1.4
Profit Express Ltd.	900	156
Minur LLC	800	20
Consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd.	900	1.44
Consortium of Contractor CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture	4366.0	6311.0
Total	7266.0	6489.84

4.5. Waste Management

190. Waste management is carried out in accordance with the SSEMP. The contractors signed the contract with municipal services for the removal of waste generated during construction. The table below shows the amount of waste produced by contractors during the reporting period.
191. In Balykchy, Impulse-Osh LLC and Profit Express signed a contract for waste removal with the ME Tazalyk, the disposal place is the municipal landfill which is 1.5 km from Balykchy. Excess soil is temporally stored at the area allocated by ME Tazalyk.
192. The consortium of CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co signed a contract with Tazalyk to remove waste, the excess soil is stored in a designated area in agreement with Tazalyk.
193. In Karakol, consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd. signed a contract for waste removal with the ME Tazalyk, the disposal place is the municipal landfill

which is 5 km from Karakol. The excess soil is stored in a designated area in agreement with Tazalyk.

Table 4-3 Waste generated during construction works

Name of Contractor	Excess soil	Solid domestic wastes	Residuals of PE pipes
1	2	3	4
Impulse-Osh Ltd.	3415.32	1.7	266 lin m (with following use)
Profit Express Ltd.	39.58	1.7	-
Minur LLC	3303.59	1.1	-
Consortium of Inzhenernaya Zashchita Ltd. and Polymer Snab Asia Ltd.	3594 m3	1.4	50 lin m (with following use)
Consortium of Contractor CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture	1.7 (contaminated soil)	14.7	-
Total:	**10354.19**	**20.6**	**316.0**

4.6. Occupational Health and Safety

4.6.1. Community Health and Safety

194. During the reporting period, there were no incidents that led or could lead to public health and safety problems. All works were carried out only during working hours and ended before 6 p.m. Before construction work begins, the local community is notified in advance about the works and a danger of being near open trenches.
195. During the period, no traffic accidents was recorded.

4.6.2. Workers safety and health

196. There were no accidents and/or serious incidents with the employees during the reporting period. The Contractors have appointed HSE Engineers. Contact information is shown in Table 2-1. Contractors' personnel are regularly instructed in safety and environmental

protection. The Contractor's Safety Plan has been updated to include activities related to Covid-19. Workers are fully provided with the necessary PPE, first aid kits and sanitizers.

197. To protect the health and safety of workers, as well as surrounding communities, the contractors of each subproject conduct a workplace review and risk assessment for exposure to COVID-19. The Specialists conducted training on how to prevent the spread of COVID-19.

198. The specialists of contractors conduct regular briefings on safety and the use PPE during construction work.

4.7. Training

199. No trainings have been conducted by DSC during the reporting period. HSE specialists provide safety briefings to the workers. Quarterly briefings are provided for all workers and initial briefing for newly hired employees.

5. FUNCTIONING OF SEMP

5.1. SEMP Review

200. All contractors have a full-time environment, health and safety (EHS) officer for implementation of EMP/SSEMP, community liaising, reporting and grievance redressal on day-to-day basis. No complaints have been received from residents during the reporting period. A verbal interview of residents showed a positive attitude of residents to the project implementation.
201. The main areas with which the contractors have difficulty are the lack of a bio-toilet at the construction site, inadequate fencing of open trenches and manholes to ensure the safety of people.
202. During the reporting period, no instrumental air measurements have been taken at all construction sites.
203. SSEMP developed by the contractors for networks is used in all stages of civil works.

6. GOOD PRACTICES AND OPPORTUNITY FOR IMPROVEMENT

6.1. Good Practice

204. There isn't any activity that can be recorded as good practice during the reporting period.

205. The practice of collecting and transferring plastic bottles for further recycling is adopted based on the example of Minur Ltd. Bottles are collected jointly with Izumrud Tazalyk Service Company.

Figure 6-1. Container for plastic bottles.

6.2. Opportunities for Improvement

206. Joint work with contractors has to be strengthened to organize instrumental monitoring in accordance with SSEMPs. Training on SSEMP implementation, health and safety, etc. to be conducted for contractors.

7. SUMMARY AND RECOMMENDATIONS

7.1. Summary

207. During the reporting period, the contractors have been implementing the main activities specified in SSEMPs. These include briefings on safety and health at all construction sites (there is a log of briefings).
208. Bio-toilets, trash cans, first aid kits, fire safety equipment, crossing bridges are available on the sites. The construction areas are fenced. Before the start of construction work, the communities are informed about the timing and types of work, as well as the possible inconvenience associated with them.
209. Workers are provided with personal protective equipment, drinking water, etc.
210. Visual monitoring is carried out at construction sites. However, it should be noted that no instrumental air monitoring has been conducted during the reporting period. The work on instrumental monitoring should be done in the next reporting period.
211. The population has a positive attitude towards the project. No complaints from residents have been received during the reporting period.
212. Balykchy City:
    - Consortium of Contractor CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co., Ltd Joint Venture has corrected the non-compliances occurred during the construction (earthworks for a tank without SEMP approved by EA), and Corrective Action Plan was developed.
    - There is still one pending open Non-compliance to be corrected by January.
    - The PMO obtained the approval of ADB to the interim SEMP for construction phase of Balykchy WWTP on September 1, 2022. After that, construction work on Balykchy WWTP was resumed.
213. Karakol City:
    - SPS №4 in Pristan-Przhevalsk An Environmental Impact Assessment (OVOS) (acronym in Russian for Environmental Impact Assessment) shall be developed (currently under development) during the detailed designing in accordance with the General Technical Regulations on Environmental Safety, the Regulation on Environmental Impact Assessment (OVOS) Procedure (Resolution of the KR Government No. 60 dated 13.02.2015), the Regulation on Procedure of State Environmental Expertise (Resolution of the KR Government No. 248 dated 07.05.2014; also section “Environmental Protection” of Karakol sewerage system improvement design was developed. SITE: “SPS-4 and collector from SPS-4 to SPS-2, the 2nd Phase of construction” is under review by the State

Ecological Expertise now. As soon as the design is completed (planned by end March 2023), draft IEE will be finalized by DSC and submitted for review.

214. Also, during the reporting period the following activities have been carried out within the scope of the project:

- Activities for updating Balykchy IEE have been completed.
- Sludge Management Plan has been developed which is under review of ADB;

215. The construction sites are audited by DSC National Environmental Specialist to check the compliance with measures specified in the SSEMP.

216. The DSC's National Environmental Specialist O.V. Zinina visited the construction sites of sewer networks in Balykchy on July 20, August 4, September 15, October 26, November 24, 2022.

217. The DSC's National Environmental Specialist O.V. Zinina visited the construction site of Balykchy WWTP on July 20, August 4, September 15, October 26, November 24, 2022. Non-compliances detected in the previous report period were corrected from July to August. The civil works started in September.

218. The DSC's National Environmental Specialist O.V. Zinina visited the construction sites of sewer networks in Karakol on July 21, August 5, September 16, October 27, November 25, 2022.

7.2. Recommendations

219. Provide the assistance to CCCC Tianjin Dredging Co., Ltd, China Road and Bridge Corporation and China Northeast Municipal Engineering Design and Research Institute Co for Design and Build the Balykchy WWTP to introduce the monitoring system in a sustainable manner.

220. First of all, it is necessary to monitor all components of the environment prescribed in SSEMPs. This requires continuous instrumental tests of air quality. Periodic soil and water tests Analysis of the data obtained will minimize the environmental impact. The results of monitoring and the relevant analysis will be the basis for monitoring in the operation phase, which in turn will ensure a sustainable monitoring.

221.

222. Not all activities are always performed on an ongoing basis; direct training for workers by the ES of contractors is recommended to increase effectiveness.

223. Emphasis should be paid to instrumental air quality monitoring by all contractors involved in the project.

224. The DSC will provide support to all contractors in conclusion the contracts with a laboratory for instrumental monitoring.

APPENDICES

Appendix I - Reports on Monitoring of the Contractors

Project Number:	
Project Name:	
Package No and/or Lot No.	
Components/Scope of Work:	
Progress (percentage):	
Location/Site inspected:	Balykchy WWTP
Date of inspection:	24.11.2022
Contractor Company:	
Supervision Company:	
SSEMP Clearance Date:	

	Monitoring/Inspection Questions	**Yes/ No/ Not applicable (n/a)**	**Observation/ Reason/ Justification**	**Required Action**
1.	Documents			
a.	Is the EIA/IEE updated based on the contract's scope of work and/or detailed engineering design?	No [1]	During the reporting period (November), the EIA/IEE was not updated	
b.	Any change in scope of work, design, location, and/or method of construction?	No		
c.	All permits/clearances on environment, health and safety (EHS) obtained?	Yes		
d.	Is the SSEMP informed to workers including subcontractors?	Yes		
2.	Contractor EHS Onsite			

[1] IEE was updated. Under approval by ADB

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Is an Environment Supervisor available?	Yes		
b.	Is the Safety Officer on-site?	No		
c.	Is a copy of the SSEMP available on-site and in worksites?	Yes		
d.	Has Contractor established an operational system for HSE?			
e.	Has the Contractor established data management system for HSE?	Yes		
f.	Laborers hired from licensed manpower suppliers only?	N/A		
g.	All workers (including manpower supply laborers) are insured?	Yes		
h.	Number of workers provided with orientation on safeguards and HSE?	20 people		
i.	Medical screening carried out for all workers for communicable diseases such as HIV and COVID-19?	No		
j.	Company EHS policy available and displayed?	Yes		
k.	Site risk assessment carried out before start of work?	No		
l.	Permit to work system followed for critical works?	Yes		
m.	Incident reporting and investigation system in place?	Yes		
n.	Health and Safety committee established and OHS performance reviewed periodically?	No		
3.	The Facilities			

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are there separate sanitary facilities/toilets for male and female workers?	Yes		
b.	Are the toilets in good conditions, clean, and provided with water all the time?	Yes		
c.	Is drinking water supply available for workers?	Yes		
d.	Is there a rest area for workers?	Yes		
e.	Are storage areas for chemicals available and with protection? İn safe locations?	Not. Chemicals are not stored on site		
f.	Protection from extreme weather provided?	Yes		
g.	Are the workers camp kept in clean and safe conditions?	The camp is in safe conditions.	During inspection the garbage cans were full. According to the personnel, they will be removed very soon.	There is construction debris that should be removed.
3.	Occupational Health and Safety			
a.	Toolbox talk given to all workers **on daily basis? (*check logbook*)**	No	There is an Initial Briefing Log. There is no daily log.	Start the Briefing Log on site.
b.	Has the Health and Safety Plan been reviewed and revised from the last inspection?	No		
c.	Is the Health and Safety Plan translated to local language understandable by foreign and local workers?	No	Plan in Russian	
d.	Is there a logbook for Health and Safety?	No		Must be started
e.	Are there first aiders and first aid kits on site? (1 kit and 1 first aider for every 25 workers)	Yes		
f.	Are emergency contact details available on-site?	Yes		
g.	Are there PPEs available? What are they?	Yes		
h.	Are the PPEs in good condition?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
i.	Are the PPEs being used by workers **at all times**?	Yes		
j.	Are there firefighting equipment on site?	Yes		
k.	Are excavation trenches provided with shores or protection from landslide?	Yes		
l.	Excavation and trenches deeper than 2 meters are done through permit to work system and following the safe system of work? *(check permit to work system – preparation of this is a fundamental task of the Health and Safety Officer)*			
m.	Is break time for workers provided?	Yes		
n.	Adequate level of light is maintained for working during dark hours?	Yes		
o.	Buried and overhead utilities identified and controls taken; as appropriate?	No		
p.	Electrical tools being used are double insulated and damage free?	No		
q.	Equipment and tools being used are safe and not broken?	Not broken		
r.	All work above 2 meters at height is done with guard rails installed and wearing full body harness?	Yes		
s.	Confined space entry is done through Permit to work system?	No	There no works in confined space	
t.	Are workers (contractors and subcontractors) covered by accident insurance?	Yes		
u.	Are signages and warning signs installed on worksites? How many per xxx meters and locations?	Yes	Two locations on site	

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
v.	Are signages and warning signs translated to local language?	No	Signs are in Russian	
w.	Are signages and warning signs visible even at night time?	Yes		
x.	Are there any accidents since the last inspection? How many and what are these accidents?	No		
y.	Are the accidents reported to the PIU, ME Vodokanal and PIU??	n/a		
4.	Community Safety			
a.	Are excavation areas provided with hard barricades around them to protect accidental fall?	Yes		
b.	Are safety signages posted around the sites where there are houses, business, or communities?	n/a		
c.	Are temporary and safe walkways for pedestrians available near work sites?	n/a		
d.	Are there traffic officers or flagman/flagmen to manage traffic and speed limit?	n/a		
e.	Are there traffic officers or flagman/flagmen near sites where there are houses, business, or communities?	n/a		
f.	Is there a record of treated water quality testing/measurement?	no		
g.	Is there a logbook for community feedback and/or complaints?	yes		
h.	How many stakeholders engagement, consultations, and information disclosure on EHS have been conducted?			
5.	Solid Waste Management			

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are excavated materials placed sufficiently away from water courses (at least 20 meters)?	yes		
b.	Is solid waste segregation and management in each work site?	No		
c.	Are hazardous wastes stored separately from non-hazardous wastes?	n/a		
d.	Is there a daily collection of solid wastes from work sites?	yes		
e.	Is there a temporary storage area for wastes at worker's camp?	yes		
f.	Are reuseable and recyclable materials segregated?	yes		
g.	Is there a logbook for waste collection and disposal?			
6.	Water Pollution Control and Wastewater Management			
a.	Are instrumental water quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
b.	Are instrumental wasterwater quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
c.	Does the Contractor test the water supplied to workers for drinking and other domestic use?	no	Bottled water is tested by the manufacturer	
d.	Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?	Yes		
e.	Is any wastewater discharged to storm drains?	No		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
f.	Is any wastewater being treated prior to discharge?	No		
g.	Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?			
h.	Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?	n/a		
i.	Is there a logbook for water and wastewater quality monitoring?	n/a		
7.	Dust Control			
a.	Are instrumental air quality monitoring activities conducted per agreed SSEMP and monitoring program?	no	Visual inspection	
b.	Is the construction site watered on daily basis to minimize generation of dust?	yes		
c.	Are roads within and around the construction sites sprayed with water on regular intervals?	yes		
d.	Is there a speed control for vehicles at construction sites?	yes	NMT 5km/h	
e.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	Yes		
f.	Are construction vehicles carrying soils and other excavated materials/spoils covered?	No	Dump is at the same site of WWTP	
g.	Are power/diesel generators provided with air pollution control devices?	n/a		
h.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid emission permits?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
i.	Is there a logbook for air quality monitoring?	Yes		
8.	Noise Control			
a.	Are instrumental noise monitoring activities conducted per agreed SSEMP and monitoring program?	Yes	Noise meter installed in the mobile	
b.	Are there any works near sensitive receptors during night time?	No		
c.	Do generators operate with doors closed or provided with sound barrier around them?	n/a		
d.	Is idle equipment turned off or throttled down?	n/a		
e.	Are there noise mitigation measures adopted at construction sites?	yes		
f.	Are neighboring residents notified in advance of any noisy activities expected at construction sites?	n/a		
g.	Is there a logbook for noise level monitoring?	Yes		
9.	Soil Contamination Control			
a.	Are fuels, oils, lubricants, bitumen and other similar materials stored in a covered and concrete-lined storage area?	No		
b.	Are the fuel tanks/storage constructed with bund to prevent oil, fuels, or chemicals from escaping into the environment if the tank/storage leak or burst?	n/a		
c.	Are fuels, oils, lubricants, bitumen and other similar materials properly labeled?	n/a		
d.	Are storage areas inspected on daily basis?	n/a		
e.	Are there sufficient equipment and materials to manage spills?	n/a		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
f.	There are no source of fire or spark near the storage areas (within 20 meters)?	n/a		
g.	Are material safety data sheet (MSDS) available on site?	n/a		
h.	Are excess chemicals or materials disposed according the MSDS?	n/a		
10.	Traffic Management			
a.	Are reflective traffic signages available around the construction sites and nearby roads?	no		
b.	Are re-routing signages sufficient to guide motorists?	n/a		
c.	Are the excavation sites along roads provided with hard barricades with reflectors?	n/a		
d.	Are the excavation sites provided with sufficient lighting at night?	Yes		
e.	Are contractor's vehicles and heavy equipment parked properly and not causing additional traffic burden?	n/a		
f.	Are affected residents, business and local communities informed in advance of traffic rerouting, works, or road closure?	n/a		
10.	Grievance Redressal, Stakeholders Engagement, and Information Disclosure			
a.	Has the contractors provided contact details of focal persons in case of complaints using permanent signboards?	Yes		
b.	Are the contact details readable and understable by target audience?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
c.	Are the workers (contractors and subcontractors) informed of the GRM?	Yes		
d.	Have the PIU, supervising consultants, and contractors provided EHS-related information to local communities, business, and sensitive receptors?	Yes		
e.	Are EHS records/documents readily available at the site, to the inspection team, and stakeholders?	Yes		
	Other Issues/Concerns			
	Red Flags:			

Name of Inspector/s:		**Name of PMO/PIU Staff:**	
Designation:		**Designation:**	
Contractor Site Manager:		**DSC/CSC National Envi Specialist:**	
Contractor Envi Officer:		**DSC/CSC International Envi Specialist:**	
Contractor Health and Safety Officer:			

Project Number:	
Project Name:	
Package No and/or Lot No.	
Components/Scope of Work:	
Progress (percentage):	
Location/Site inspected:	Balykchy, Impulse-Osh, Togolok Moldo str
Date of inspection:	24.11.2022
Contractor Company:	
Supervision Company:	
SSEMP Clearance Date:	

	Monitoring/Inspection Questions	**Yes/ No/ Not applicable (n/a)**	**Observation/ Reason/ Justification**	**Required Action**
1.	Documents			
a.	Is the EIA/IEE updated based on the contract's scope of work and/or detailed engineering design?	No		
b.	Any change in scope of work, design, location, and/or method of construction?	No		
c.	All permits/clearances on environment, health and safety (EHS) obtained?	Yes		
d.	Is the SSEMP informed to workers including subcontractors?	Yes		
2.	Contractor EHS Onsite			
a.	Is an Environment Supervisor available?			
b.	Is the Safety Officer on-site?			
c.	Is a copy of the SSEMP available on-site and in worksites?			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Has Contractor established an operational system for HSE?			
e.	Has the Contractor established data management system for HSE?			
f.	Laborers hired from licensed manpower suppliers only?	n/a		
g.	All workers (including manpower supply laborers) are insured?	no		
h.	Number of workers provided with orientation on safeguards and HSE?	20 people		
i.	Medical screening carried out for all workers for communicable diseases such as HIV and COVID-19?	No		
j.	Company EHS policy available and displayed?	Yes		
k.	Site risk assessment carried out before start of work?	No		
l.	Permit to work system followed for critical works?	Yes		
m.	Incident reporting and investigation system in place?	Yes		
n.	Health and Safety committee established and OHS performance reviewed periodically?	No		
3.	The Facilities			
a.	Are there separate sanitary facilities/toilets for male and female workers?	No	There is a portable toilet	
b.	Are the toilets in good conditions, clean, and provided with water all the time?	Yes		
c.	Is drinking water supply available for workers?	Yes		
d.	Is there a rest area for workers?	No		
e.	Are storage areas for chemicals available and with protection? İn safe locations?	n/a		
f.	Protection from extreme weather provided?			

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
g.	Are the workers camp kept in clean and safe conditions?			
3.	Occupational Health and Safety			
a.	Toolbox talk given to all workers **on daily basis? (*check logbook*)**	No	There is an Initial Briefing Log. There is no daily log.	Start the Briefing Log on site.
b.	Has the Health and Safety Plan been reviewed and revised from the last inspection?	No		
c.	Is the Health and Safety Plan translated to local language understandable by foreign and local workers?	No	Plan is in Russian	
d.	Is there a logbook for Health and Safety?	No		Should be strated.
e.	Are there first aiders and first aid kits on site? (1 kit and 1 first aider for every 25 workers)	Yes		
f.	Are emergency contact details available on-site?	Yes		
g.	Are there PPEs available? What are they?	Yes		
h.	Are the PPEs in good condition?	Yes		
i.	Are the PPEs being used by workers **at all times**?	Yes		
j.	Are there firefighting equipment on site?	Yes		
k.	Are excavation trenches provided with shores or protection from landslide?	Yes		
l.	Excavation and trenches deeper than 2 meters are done through permit to work system and following the safe system of work? *(check permit to work system – preparation of this is a fundamental task of the Health and Safety Officer)*			
m.	Is break time for workers provided?	Yes		
n.	Adequate level of light is maintained for working during dark hours?	n/a	Works are implemented only at day time	
o.	Buried and overhead utilities identified and controls taken; as appropriate?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
p.	Electrical tools being used are double insulated and damage free?	No		
q.	Equipment and tools being used are safe and not broken?	Not broken		
r.	All work above 2 meters at height is done with guard rails installed and wearing full body harness?	yes		
s.	Confined space entry is done through Permit to work system?	n/a	There are no works in a confined space	
t.	Are workers (contractors and ubcontractors) covered by accident insurance?	No		
u.	Are signages and warning signs installed on worksites? How many per xxx meters and locations?	Yes	In two locations at 4-5 meters	
v.	Are signages and warning signs translated to local language?	No	The signed are in Russian	
w.	Are signages and warning signs visible even at night time?	No		
x.	Are there any accidents since the last inspection? How many and what are these accidents?	No		
y.	Are the accidents reported to the PIU, ME Vodokanal and PMO?	n/a		
4.	Community Safety			
a.	Are excavation areas provided with hard barricades around them to protect accidental fall?	Yes		
b.	Are safety signages posted around the sites where there are houses, business, or communities?	Yes		
c.	Are temporary and safe walkways for pedestrians available near work sites?	n/a	Restoration of sidewalks is in progress	
d.	Are there traffic officers or flagman/flagmen to manage traffic and speed limit?	no		
e.	Are there traffic officers or flagman/flagmen near sites where there are houses, business, or communities?	no		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
f.	Is there a record of treated water quality testing/measurement?	no		
g.	Is there a logbook for community feedback and/or complaints?	yes		
h.	How many stakeholders engagement, consultations, and information disclosure on EHS have been conducted?			
5.	Solid Waste Management			
a.	Are excavated materials placed sufficiently away from water courses (at least 20 meters)?	Yes		
b.	Is solid waste segregation and management in each work site?	No		
c.	Are hazardous wastes stored separately from non-hazardous wastes?	n/a		
d.	Is there a daily collection of solid wastes from work sites?	Yes		
e.	Is there a temporary storage area for wastes at worker's camp?	Yes		
f.	Are reuseable and recyclable materials segregated?	No		
g.	Is there a logbook for waste collection and disposal?	Yes		
6.	Water Pollution Control and Wastewater Management			
a.	Are instrumental water quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
b.	Are instrumental wasterwater quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
c.	Does the Contractor test the water supplied to workers for drinking and other domestic use?	no	Bottled water is tested by the manufacturer.	
d.	Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?	No		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
e.	Is any wastewater discharged to storm drains?	No		
f.	Is any wastewater being treated prior to discharge?	No		
g.	Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?			
h.	Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?	n/a		
i.	Is there a logbook for water and wastewater quality monitoring?	n/a		
7.	Dust Control			
a.	Are instrumental air quality monitoring activities conducted per agreed SSEMP and monitoring program?	No	Visual inspection	
b.	Is the construction site watered on daily basis to minimize generation of dust?	Yes		
c.	Are roads within and around the construction sites sprayed with water on regular intervals?	Yes		
d.	Is there a speed control for vehicles at construction sites?	Yes	NMT 5 km/h	
e.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	n/a		
f.	Are construction vehicles carrying soils and other excavated materials/spoils covered?	no		
g.	Are power/diesel generators provided with air pollution control devices?	n/a		
h.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid emission permits?	yes		
i.	Is there a logbook for air quality monitoring?	Yes		
8.	Noise Control			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are instrumental noise monitoring activities conducted per agreed SSEMP and monitoring program?	Yes	Noise meter installed in the mobile	
b.	Are there any works near sensitive receptors during night time?	No		
c.	Do generators operate with doors closed or provided with sound barrier around them?	n/a		
d.	Is idle equipment turned off or throttled down?	n/a		
e.	Are there noise mitigation measures adopted at construction sites?	Yes	Works are not being executed in evenings. Not more than 2 (???) work at the same time	
f.	Are neighboring residents notified in advance of any noisy activities expected at construction sites?	Yes		
g.	Is there a logbook for noise level monitoring?	Yes		
9.	Soil Contamination Control			
a.	Are fuels, oils, lubricants, bitumen and other similar materials stored in a covered and concrete-lined storage area?	No		
b.	Are the fuel tanks/storage constructed with bund to prevent oil, fuels, or chemicals from escaping into the environment if the tank/storage leak or burst?	n/a		
c.	Are fuels, oils, lubricants, bitumen and other similar materials properly labeled?	n/a		
d.	Are storage areas inspected on daily basis?	n/a		
e.	Are there sufficient equipment and materials to manage spills?	n/a		
f.	There are no source of fire or spark near the storage areas (within 20 meters)?	n/a		
g.	Are material safety data sheet (MSDS) available on site?	n/a		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
h.	Are excess chemicals or materials disposed according the MSDS?	n/a		
10.	Traffic Management			
a.	Are reflective traffic signages available around the construction sites and nearby roads?	no		
b.	Are re-routing signages sufficient to guide motorists?	yes		
c.	Are the excavation sites along roads provided with hard barricades with reflectors?	no		
d.	Are the excavation sites provided with sufficient lighting at night?	no	There is only municipal lighting, not everywhere	
e.	Are contractor's vehicles and heavy equipment parked properly and not causing additional traffic burden?	Yes		
f.	Are affected residents, business and local communities informed in advance of traffic rerouting, works, or road closure?	Yes		
10.	Grievance Redressal, Stakeholders Engagement, and Information Disclosure			
a.	Has the contractors provided contact details of focal persons in case of complaints using permanent signboards?	yes		
b.	Are the contact details readable and understable by target audience?	yes		
c.	Are the workers (contractors and subcontractors) informed of the GRM?	Yes		
d.	Have the PIU, supervising consultants, and contractors provided EHS-related information to local communities, business, and sensitive receptors?	Yes		
e.	Are EHS records/documents readily available at the site, to the inspection team, and stakeholders?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
	Other Issues/Concerns			
	Red Flags:			

Name of Inspector/s:		**Name of PMO/PIU Staff:**	
Designation:		**Designation:**	
Contractor Site Manager:		**DSC/CSC National Envi Specialist:**	
Contractor Envi Officer:		**DSC/CSC International Envi Specialist:**	
Contractor Health and Safety Officer:			

Project Number:	
Project Name:	
Package No and/or Lot No.	
Components/Scope of Work:	
Progress (percentage):	
Location/Site inspected:	Karakol, Consortium of Inzhenernaya Zashchita and PolimerSnabAsia, Sovetskaya str.
Date of inspection:	25.11.2022
Contractor Company:	
Supervision Company:	
SSEMP Clearance Date:	

	Monitoring/Inspection Questions	**Yes/ No/ Not applicable (n/a)**	**Observation/ Reason/ Justification**	**Required Action**
1.	Documents			
a.	Is the EIA/IEE updated based on the contract's scope of work and/or detailed engineering design?	No		
b.	Any change in scope of work, design, location, and/or method of construction?	No		
c.	All permits/clearances on environment, health and safety (EHS) obtained?	Yes		
d.	Is the SSEMP informed to workers including subcontractors?	Yes		
2.	Contractor EHS Onsite			
a.	Is an Environment Supervisor available?	yes		
b.	Is the Safety Officer on-site?	yes		
c.	Is a copy of the SSEMP available on-site and in worksites?	yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Has Contractor established an operational system for HSE?	yes		
e.	Has the Contractor established data management system for HSE?	yes		
f.	Laborers hired from licensed manpower suppliers only?	n/a		
g.	All workers (including manpower supply laborers) are insured?	no		
h.	Number of workers provided with orientation on safeguards and HSE?	8 people		
i.	Medical screening carried out for all workers for communicable diseases such as HIV and COVID-19?	No		
j.	Company EHS policy available and displayed?	Yes		
k.	Site risk assessment carried out before start of work?	No		
l.	Permit to work system followed for critical works?	Yes		
m.	Incident reporting and investigation system in place?	Yes		
n.	Health and Safety committee established and OHS performance reviewed periodically?	No		
3.	The Facilities			
a.	Are there separate sanitary facilities/toilets for male and female workers?	n/a	There is a portable toilet	
b.	Are the toilets in good conditions, clean, and provided with water all the time?	Yes		
c.	Is drinking water supply available for workers?	Yes		
d.	Is there a rest area for workers?	No		
e.	Are storage areas for chemicals available and with protection? İn safe locations?	n/a		
f.	Protection from extreme weather provided?	no		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
g.	Are the workers camp kept in clean and safe conditions?	n/a		
3.	Occupational Health and Safety			
a.	Toolbox talk given to all workers **on daily basis? (*check logbook*)**	No	There is an Initial Briefing Log. There is a Log of On-job Briefing.	
b.	Has the Health and Safety Plan been reviewed and revised from the last inspection?	No		
c.	Is the Health and Safety Plan translated to local language understandable by foreign and local workers?	No	Plan is in Russian	
d.	Is there a logbook for Health and Safety?	No		Should be started.
e.	Are there first aiders and first aid kits on site? (1 kit and 1 first aider for every 25 workers)	Yes		
f.	Are emergency contact details available on-site?	Yes		
g.	Are there PPEs available? What are they?	Yes		
h.	Are the PPEs in good condition?	Yes		
i.	Are the PPEs being used by workers **at all times**?	Yes		
j.	Are there firefighting equipment on site?	Yes		
k.	Are excavation trenches provided with shores or protection from landslide?	Yes		
l.	Excavation and trenches deeper than 2 meters are done through permit to work system and following the safe system of work? *(check permit to work system – preparation of this is a fundamental task of the Health and Safety Officer)*			
m.	Is break time for workers provided?	Yes		
n.	Adequate level of light is maintained for working during dark hours?	n/a	Works are implemented only at day time	

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
o.	Buried and overhead utilities identified and controls taken; as appropriate?	Yes		
p.	Electrical tools being used are double insulated and damage free?	No		
q.	Equipment and tools being used are safe and not broken?	Not broken		
r.	All work above 2 meters at height is done with guard rails installed and wearing full body harness?	yes		
s.	Confined space entry is done through Permit to work system?	n/a	There are no works in a confined space	
t.	Are workers (contractors and ubcontractors) covered by accident insurance?	No		
u.	Are signages and warning signs installed on worksites? How many per xxx meters and locations?	Yes	In two locations at 35 meters	
v.	Are signages and warning signs translated to local language?	No	The signs are in Russian	
w.	Are signages and warning signs visible even at night time?	No		
x.	Are there any accidents since the last inspection? How many and what are these accidents?	No		
y.	Are the accidents reported to the PIU, ME Vodokanal and PMO?	n/a		
4.	Community Safety			
a.	Are excavation areas provided with hard barricades around them to protect accidental fall?	Yes		
b.	Are safety signages posted around the sites where there are houses, business, or communities?	Yes		
c.	Are temporary and safe walkways for pedestrians available near work sites?	n/a	Restoration of sidewalks is in progress	
d.	Are there traffic officers or flagman/flagmen to manage traffic and speed limit?	no		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
e.	Are there traffic officers or flagman/flagmen near sites where there are houses, business, or communities?	no		
f.	Is there a record of treated water quality testing/measurement?	no		
g.	Is there a logbook for community feedback and/or complaints?	yes		
h.	How many stakeholders engagement, consultations, and information disclosure on EHS have been conducted?	Twice a month	Engagement of the residents takes place before the start of works on each street.	
5.	Solid Waste Management			
a.	Are excavated materials placed sufficiently away from water courses (at least 20 meters)?	Yes		
b.	Is solid waste segregation and management in each work site?	No		
c.	Are hazardous wastes stored separately from non-hazardous wastes?	n/a		
d.	Is there a daily collection of solid wastes from work sites?	Yes		
e.	Is there a temporary storage area for wastes at worker's camp?	Yes		
f.	Are reuseable and recyclable materials segregated?	No		
g.	Is there a logbook for waste collection and disposal?	Yes		
6.	Water Pollution Control and Wastewater Management			
a.	Are instrumental water quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
b.	Are instrumental wasterwater quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
c.	Does the Contractor test the water supplied to workers for drinking and other domestic use?	no	Bottled water is tested by the manufacturer.	
d.	Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
e.	Is any wastewater discharged to storm drains?	No		
f.	Is any wastewater being treated prior to discharge?	No		
g.	Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?			
h.	Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?	n/a		
i.	Is there a logbook for water and wastewater quality monitoring?	n/a		
7.	Dust Control			
a.	Are instrumental air quality monitoring activities conducted per agreed SSEMP and monitoring program?	No	Visual inspection	
b.	Is the construction site watered on daily basis to minimize generation of dust?	Yes		
c.	Are roads within and around the construction sites sprayed with water on regular intervals?	Yes		
d.	Is there a speed control for vehicles at construction sites?	Yes	NMT 5 km/h	
e.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	n/a		
f.	Are construction vehicles carrying soils and other excavated materials/spoils covered?	n/a	No transportation works	
g.	Are power/diesel generators provided with air pollution control devices?	n/a		
h.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid emission permits?	yes		
i.	Is there a logbook for air quality monitoring?	Yes		
8.	Noise Control			

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are instrumental noise monitoring activities conducted per agreed SSEMP and monitoring program?	Yes	Noise meter installed in the mobile	
b.	Are there any works near sensitive receptors during night time?	No		
c.	Do generators operate with doors closed or provided with sound barrier around them?	n/a		
d.	Is idle equipment turned off or throttled down?	n/a		
e.	Are there noise mitigation measures adopted at construction sites?	Yes	Works are not being executed in evenings. Not more than 2 (???) work at the same time	
f.	Are neighboring residents notified in advance of any noisy activities expected at construction sites?	Yes		
g.	Is there a logbook for noise level monitoring?	Yes		
9.	Soil Contamination Control			
a.	Are fuels, oils, lubricants, bitumen and other similar materials stored in a covered and concrete-lined storage area?	No		
b.	Are the fuel tanks/storage constructed with bund to prevent oil, fuels, or chemicals from escaping into the environment if the tank/storage leak or burst?	n/a		
c.	Are fuels, oils, lubricants, bitumen and other similar materials properly labeled?	n/a		
d.	Are storage areas inspected on daily basis?	n/a		
e.	Are there sufficient equipment and materials to manage spills?	n/a		
f.	There are no source of fire or spark near the storage areas (within 20 meters)?	n/a		
g.	Are material safety data sheet (MSDS) available on site?	n/a		
h.	Are excess chemicals or materials disposed according the MSDS?	n/a		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
10.	Traffic Management			
a.	Are reflective traffic signages available around the construction sites and nearby roads?	no		
b.	Are re-routing signages sufficient to guide motorists?	yes		
c.	Are the excavation sites along roads provided with hard barricades with reflectors?	no		
d.	Are the excavation sites provided with sufficient lighting at night?	no	There is only municipal lighting, not everywhere	
e.	Are contractor's vehicles and heavy equipment parked properly and not causing additional traffic burden?	Yes		
f.	Are affected residents, business and local communities informed in advance of traffic rerouting, works, or road closure?	Yes		
10.	Grievance Redressal, Stakeholders Engagement, and Information Disclosure			
a.	Has the contractors provided contact details of focal persons in case of complaints using permanent signboards?	yes		
b.	Are the contact details readable and understable by target audience?	yes		
c.	Are the workers (contractors and subcontractors) informed of the GRM?	Yes		
d.	Have the PIU, supervising consultants, and contractors provided EHS-related information to local communities, business, and sensitive receptors?	Yes		
e.	Are EHS records/documents readily available at the site, to the inspection team, and stakeholders?	Yes		
	Other Issues/Concerns			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
	Red Flags:			

Name of Inspector/s:		**Name of PMO/PIU Staff:**	
Designation:		**Designation:**	
Contractor Site Manager:		**DSC/CSC National Envi Specialist:**	
Contractor Envi Officer:		**DSC/CSC International Envi Specialist:**	
Contractor Health and Safety Officer:			

Project Number:	
Project Name:	
Package No and/or Lot No.	
Components/Scope of Work:	
Progress (percentage):	
Location/Site inspected:	Karakol, Minur Ltd. Zhamansarieva str
Date of inspection:	25.11.2022
Contractor Company:	
Supervision Company:	
SSEMP Clearance Date:	

	Monitoring/Inspection Questions	**Yes/ No/ Not applicable (n/a)**	**Observation/ Reason/ Justification**	**Required Action**
1.	Documents			
a.	Is the EIA/IEE updated based on the contract's scope of work and/or detailed engineering design?	No		
b.	Any change in scope of work, design, location, and/or method of construction?	No		
c.	All permits/clearances on environment, health and safety (EHS) obtained?	Yes		
d.	Is the SSEMP informed to workers including subcontractors?	Yes		
2.	Contractor EHS Onsite			
a.	Is an Environment Supervisor available?	yes		
b.	Is the Safety Officer on-site?	yes		
c.	Is a copy of the SSEMP available on-site and in worksites?	yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Has Contractor established an operational system for HSE?	yes		
e.	Has the Contractor established data management system for HSE?	yes		
f.	Laborers hired from licensed manpower suppliers only?	n/a		
g.	All workers (including manpower supply laborers) are insured?	no		
h.	Number of workers provided with orientation on safeguards and HSE?	20 people		
i.	Medical screening carried out for all workers for communicable diseases such as HIV and COVID-19?	No		
j.	Company EHS policy available and displayed?	Yes		
k.	Site risk assessment carried out before start of work?	No		
l.	Permit to work system followed for critical works?	Yes		
m.	Incident reporting and investigation system in place?	Yes		
n.	Health and Safety committee established and OHS performance reviewed periodically?	No		
3.	The Facilities			
a.	Are there separate sanitary facilities/toilets for male and female workers?	n/a	There is a portable toilet	
b.	Are the toilets in good conditions, clean, and provided with water all the time?	Yes		
c.	Is drinking water supply available for workers?	Yes		
d.	Is there a rest area for workers?	No	Works are implemented along roads.	
e.	Are storage areas for chemicals available and with protection? İn safe locations?	n/a		

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
f.	Protection from extreme weather provided?	no		
g.	Are the workers camp kept in clean and safe conditions?	n/a		
3.	Occupational Health and Safety			
a.	Toolbox talk given to all workers **on daily basis? (*check logbook*)**	Yes	There is an Initial Briefing Log. There is a Log of On-job Briefing.	
b.	Has the Health and Safety Plan been reviewed and revised from the last inspection?	No		
c.	Is the Health and Safety Plan translated to local language understandable by foreign and local workers?	No	Plan is in Russian	
d.	Is there a logbook for Health and Safety?	No		Should be started.
e.	Are there first aiders and first aid kits on site? (1 kit and 1 first aider for every 25 workers)	Yes		
f.	Are emergency contact details available on-site?	Yes		
g.	Are there PPEs available? What are they?	Yes		
h.	Are the PPEs in good condition?	Yes		
i.	Are the PPEs being used by workers **at all times**?	Yes		
j.	Are there firefighting equipment on site?	Yes		
k.	Are excavation trenches provided with shores or protection from landslide?	Yes		
l.	Excavation and trenches deeper than 2 meters are done through permit to work system and following the safe system of work? *(check permit to work system – preparation of this is a fundamental task of the Health and Safety Officer)*			
m.	Is break time for workers provided?	Yes		
n.	Adequate level of light is maintained for working during dark hours?	n/a	Works are implemented only at day time	

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
o.	Buried and overhead utilities identified and controls taken; as appropriate?	Yes		
p.	Electrical tools being used are double insulated and damage free?	No		
q.	Equipment and tools being used are safe and not broken?	Not broken		
r.	All work above 2 meters at height is done with guard rails installed and wearing full body harness?	yes		
s.	Confined space entry is done through Permit to work system?	n/a	There are no works in a confined space	
t.	Are workers (contractors and ubcontractors) covered by accident insurance?	No		
u.	Are signages and warning signs installed on worksites? How many per xxx meters and locations?	Yes	4 signs at 50 meters	
v.	Are signages and warning signs translated to local language?	No	The signs are in Russian	
w.	Are signages and warning signs visible even at night time?	No		
x.	Are there any accidents since the last inspection? How many and what are these accidents?	No		
y.	Are the accidents reported to the PIU, ME Vodokanal and PMO?	n/a		
4.	Community Safety			
a.	Are excavation areas provided with hard barricades around them to protect accidental fall?	Yes		
b.	Are safety signages posted around the sites where there are houses, business, or communities?	Yes		
c.	Are temporary and safe walkways for pedestrians available near work sites?	n/a	Restoration of sidewalks is in progress	
d.	Are there traffic officers or flagman/flagmen to manage traffic and speed limit?	no		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
e.	Are there traffic officers or flagman/flagmen near sites where there are houses, business, or communities?	no		
f.	Is there a record of treated water quality testing/measurement?	no		
g.	Is there a logbook for community feedback and/or complaints?	yes		
h.	How many stakeholders engagement, consultations, and information disclosure on EHS have been conducted?	4 times a month	Engagement of the residents takes place before the start of works on each street.	
5.	Solid Waste Management			
a.	Are excavated materials placed sufficiently away from water courses (at least 20 meters)?	Yes		
b.	Is solid waste segregation and management in each work site?	Yes		
c.	Are hazardous wastes stored separately from non-hazardous wastes?	n/a		
d.	Is there a daily collection of solid wastes from work sites?	Yes		
e.	Is there a temporary storage area for wastes at worker's camp?	Yes		
f.	Are reuseable and recyclable materials segregated?	Yes		
g.	Is there a logbook for waste collection and disposal?	Yes		
6.	Water Pollution Control and Wastewater Management			
a.	Are instrumental water quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
b.	Are instrumental wasterwater quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
c.	Does the Contractor test the water supplied to workers for drinking and other domestic use?	no	Bottled water is tested by the manufacturer.	

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?	Yes		
e.	Is any wastewater discharged to storm drains?	No		
f.	Is any wastewater being treated prior to discharge?	No		
g.	Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?			
h.	Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?	n/a		
i.	Is there a logbook for water and wastewater quality monitoring?	n/a		
7.	Dust Control			
a.	Are instrumental air quality monitoring activities conducted per agreed SSEMP and monitoring program?	No	Visual inspection	
b.	Is the construction site watered on daily basis to minimize generation of dust?	Yes		
c.	Are roads within and around the construction sites sprayed with water on regular intervals?	Yes		
d.	Is there a speed control for vehicles at construction sites?	Yes	NMT 5 km/h	
e.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	n/a		
f.	Are construction vehicles carrying soils and other excavated materials/spoils covered?	n/a	No transportation works	
g.	Are power/diesel generators provided with air pollution control devices?	n/a		
h.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid emission permits?	yes		
i.	Is there a logbook for air quality monitoring?	Yes		

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
8.	Noise Control			
a.	Are instrumental noise monitoring activities conducted per agreed SSEMP and monitoring program?	Yes	Noise meter installed in the mobile	
b.	Are there any works near sensitive receptors during night time?	No		
c.	Do generators operate with doors closed or provided with sound barrier around them?	n/a		
d.	Is idle equipment turned off or throttled down?	n/a		
e.	Are there noise mitigation measures adopted at construction sites?	Yes	Works are not being executed in evenings. Not more than 2 (???) work at the same time	
f.	Are neighboring residents notified in advance of any noisy activities expected at construction sites?	Yes		
g.	Is there a logbook for noise level monitoring?	Yes		
9.	Soil Contamination Control			
a.	Are fuels, oils, lubricants, bitumen and other similar materials stored in a covered and concrete-lined storage area?	No		
b.	Are the fuel tanks/storage constructed with bund to prevent oil, fuels, or chemicals from escaping into the environment if the tank/storage leak or burst?	n/a		
c.	Are fuels, oils, lubricants, bitumen and other similar materials properly labeled?	n/a		
d.	Are storage areas inspected on daily basis?	n/a		
e.	Are there sufficient equipment and materials to manage spills?	n/a		
f.	There are no source of fire or spark near the storage areas (within 20 meters)?	n/a		
g.	Are material safety data sheet (MSDS) available on site?	n/a		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
h.	Are excess chemicals or materials disposed according the MSDS?	n/a		
10.	Traffic Management			
a.	Are reflective traffic signages available around the construction sites and nearby roads?	no		
b.	Are re-routing signages sufficient to guide motorists?	yes		
c.	Are the excavation sites along roads provided with hard barricades with reflectors?	no		
d.	Are the excavation sites provided with sufficient lighting at night?	no	There is only municipal lighting, not everywhere	
e.	Are contractor's vehicles and heavy equipment parked properly and not causing additional traffic burden?	Yes		
f.	Are affected residents, business and local communities informed in advance of traffic rerouting, works, or road closure?	Yes		
10.	Grievance Redressal, Stakeholders Engagement, and Information Disclosure			
a.	Has the contractors provided contact details of focal persons in case of complaints using permanent signboards?	yes		
b.	Are the contact details readable and understable by target audience?	yes		
c.	Are the workers (contractors and subcontractors) informed of the GRM?	Yes		
d.	Have the PIU, supervising consultants, and contractors provided EHS-related information to local communities, business, and sensitive receptors?	Yes		
e.	Are EHS records/documents readily available at the site, to the inspection team, and stakeholders?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
	Other Issues/Concerns			
	Red Flags:			

Name of Inspector/s:		**Name of PMO/PIU Staff:**	
Designation:		**Designation:**	
Contractor Site Manager:		**DSC/CSC National Envi Specialist:**	
Contractor Envi Officer:		**DSC/CSC International Envi Specialist:**	
Contractor Health and Safety Officer:			

Project Number:	
Project Name:	
Package No and/or Lot No.	
Components/Scope of Work:	
Progress (percentage):	
Location/Site inspected:	Balykchy, Profit Express, Mambetalieva str
Date of inspection:	24.11.2022
Contractor Company:	
Supervision Company:	
SSEMP Clearance Date:	

	Monitoring/Inspection Questions	**Yes/ No/ Not applicable (n/a)**	**Observation/ Reason/ Justification**	**Required Action**
1.	Documents			
a.	Is the EIA/IEE updated based on the contract's scope of work and/or detailed engineering design?	No [2]	During the reporting period (November), the EIA/IEE was not updated	
b.	Any change in scope of work, design, location, and/or method of construction?	No		
c.	All permits/clearances on environment, health and safety (EHS) obtained?	Yes		

[2] IEE was updated. Under approval by ADB

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Is the SSEMP informed to workers including subcontractors?	Yes		
2.	Contractor EHS Onsite			
a.	Is an Environment Supervisor available?	Yes		
b.	Is the Safety Officer on-site?	No	At the time of the visit, the inspector was absent. According to the employees he is usually at his workplace	
c.	Is a copy of the SSEMP available on-site and in worksites?	No		
d.	Has Contractor established an operational system for HSE?	Yes		
e.	Has the Contractor established data management system for HSE?	Yes		
f.	Laborers hired from licensed manpower suppliers only?	n/a		
g.	All workers (including manpower supply laborers) are insured?	Yes		
h.	Number of workers provided with orientation on safeguards and HSE?	20 people		
i.	Medical screening carried out for all workers for communicable diseases such as HIV and COVID-19?	No		
j.	Company EHS policy available and displayed?	Yes		
k.	Site risk assessment carried out before start of work?	No		
l.	Permit to work system followed for critical works?	Yes		
m.	Incident reporting and investigation system in place?	Yes		

	Monitoring/Inspection Questions	Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
n.	Health and Safety committee established and OHS performance reviewed periodically?	No		
3.	The Facilities			
a.	Are there separate sanitary facilities/toilets for male and female workers?	No	There is a portable toilet	
b.	Are the toilets in good conditions, clean, and provided with water all the time?	Yes		
c.	Is drinking water supply available for workers?	Yes		
d.	Is there a rest area for workers?	No	Work is being done along the roads	
e.	Are storage areas for chemicals available and with protection? İn safe locations?	n/a		
f.	Protection from extreme weather provided?	no		
g.	Are the workers camp kept in clean and safe conditions?	n/a		
3.	Occupational Health and Safety			
a.	Toolbox talk given to all workers **on daily basis? (*check logbook*)**	No	There is an Initial Briefing Log. There is no daily log.	Start the Briefing Log on site.
b.	Has the Health and Safety Plan been reviewed and revised from the last inspection?	No		
c.	Is the Health and Safety Plan translated to local language understandable by foreign and local workers?	No	Plan is in Russian	
d.	Is there a logbook for Health and Safety?	No		Should be strated.
e.	Are there first aiders and first aid kits on site? (1 kit and 1 first aider for every 25 workers)	Yes		
f.	Are emergency contact details available on-site?	Yes		
g.	Are there PPEs available? What are they?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
h.	Are the PPEs in good condition?	Yes		
i.	Are the PPEs being used by workers **at all times**?	Yes		
j.	Are there firefighting equipment on site?	Yes		
k.	Are excavation trenches provided with shores or protection from landslide?	Yes		
l.	Excavation and trenches deeper than 2 meters are done through permit to work system and following the safe system of work? *(check permit to work system – preparation of this is a fundamental task of the Health and Safety Officer)*			
m.	Is break time for workers provided?	Yes		
n.	Adequate level of light is maintained for working during dark hours?	n/a	Works are implemented only at day time	
o.	Buried and overhead utilities identified and controls taken; as appropriate?	Yes		
p.	Electrical tools being used are double insulated and damage free?	No		
q.	Equipment and tools being used are safe and not broken?	Not broken		
r.	All work above 2 meters at height is done with guard rails installed and wearing full body harness?	yes		
s.	Confined space entry is done through Permit to work system?	n/a	There are no works in a confined space	
t.	Are workers (contractors and ubcontractors) covered by accident insurance?	Yes		
u.	Are signages and warning signs installed on worksites? How many per xxx meters and locations?	Yes	In two locations at 4-5 meters	

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
v.	Are signages and warning signs translated to local language?	No	The signs are in Russian	
w.	Are signages and warning signs visible even at night time?	No		
x.	Are there any accidents since the last inspection? How many and what are these accidents?	No		
y.	Are the accidents reported to the PIU, ME Vodokanal and PMO?	n/a		
4.	Community Safety			
a.	Are excavation areas provided with hard barricades around them to protect accidental fall?	Yes		
b.	Are safety signages posted around the sites where there are houses, business, or communities?	Yes		
c.	Are temporary and safe walkways for pedestrians available near work sites?	n/a	Restoration of sidewalks is in progress	
d.	Are there traffic officers or flagman/flagmen to manage traffic and speed limit?	no		
e.	Are there traffic officers or flagman/flagmen near sites where there are houses, business, or communities?	no		
f.	Is there a record of treated water quality testing/measurement?	no		
g.	Is there a logbook for community feedback and/or complaints?	yes		
h.	How many stakeholders engagement, consultations, and information disclosure on EHS have been conducted?			
5.	Solid Waste Management			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are excavated materials placed sufficiently away from water courses (at least 20 meters)?	Yes		
b.	Is solid waste segregation and management in each work site?	No		
c.	Are hazardous wastes stored separately from non-hazardous wastes?	n/a		
d.	Is there a daily collection of solid wastes from work sites?	Yes		
e.	Is there a temporary storage area for wastes at worker's camp?	Yes		
f.	Are reuseable and recyclable materials segregated?	No		
g.	Is there a logbook for waste collection and disposal?	Yes		
6.	Water Pollution Control and Wastewater Management			
a.	Are instrumental water quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
b.	Are instrumental wasterwater quality monitoring activities conducted per agreed SSEMP and monitoring program?	n/a		
c.	Does the Contractor test the water supplied to workers for drinking and other domestic use?	no	Bottled water is tested by the manufacturer.	
d.	Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?	No		
e.	Is any wastewater discharged to storm drains?	No		
f.	Is any wastewater being treated prior to discharge?	No		
g.	Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
h.	Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?	n/a		
i.	Is there a logbook for water and wastewater quality monitoring?	n/a		
7.	Dust Control			
a.	Are instrumental air quality monitoring activities conducted per agreed SSEMP and monitoring program?	No	Visual inspection	
b.	Is the construction site watered on daily basis to minimize generation of dust?	Yes		
c.	Are roads within and around the construction sites sprayed with water on regular intervals?	Yes		
d.	Is there a speed control for vehicles at construction sites?	Yes	NMT 5 km/h	
e.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	n/a		
f.	Are construction vehicles carrying soils and other excavated materials/spoils covered?	no	No transportation works	
g.	Are power/diesel generators provided with air pollution control devices?	n/a		
h.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid emission permits?	yes		
i.	Is there a logbook for air quality monitoring?	Yes		
8.	Noise Control			

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
a.	Are instrumental noise monitoring activities conducted per agreed SSEMP and monitoring program?	Yes	Noise meter installed in the mobile	
b.	Are there any works near sensitive receptors during night time?	No		
c.	Do generators operate with doors closed or provided with sound barrier around them?	n/a		
d.	Is idle equipment turned off or throttled down?	n/a		
e.	Are there noise mitigation measures adopted at construction sites?	Yes	Works are not being executed in evenings. Not more than 2 (???) work at the same time	
f.	Are neighboring residents notified in advance of any noisy activities expected at construction sites?	Yes		
g.	Is there a logbook for noise level monitoring?	Yes		
9.	Soil Contamination Control			
a.	Are fuels, oils, lubricants, bitumen and other similar materials stored in a covered and concrete-lined storage area?	No		
b.	Are the fuel tanks/storage constructed with bund to prevent oil, fuels, or chemicals from escaping into the environment if the tank/storage leak or burst?	n/a		
c.	Are fuels, oils, lubricants, bitumen and other similar materials properly labeled?	n/a		
d.	Are storage areas inspected on daily basis?	n/a		
e.	Are there sufficient equipment and materials to manage spills?	n/a		
f.	There are no source of fire or spark near the storage areas (within 20 meters)?	n/a		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
g.	Are material safety data sheet (MSDS) available on site?	n/a		
h.	Are excess chemicals or materials disposed according the MSDS?	n/a		
10.	Traffic Management			
a.	Are reflective traffic signages available around the construction sites and nearby roads?	no		
b.	Are re-routing signages sufficient to guide motorists?	yes		
c.	Are the excavation sites along roads provided with hard barricades with reflectors?	no		
d.	Are the excavation sites provided with sufficient lighting at night?	no	There is only municipal lighting, not everywhere	
e.	Are contractor's vehicles and heavy equipment parked properly and not causing additional traffic burden?	Yes		
f.	Are affected residents, business and local communities informed in advance of traffic rerouting, works, or road closure?	Yes		
10.	Grievance Redressal, Stakeholders Engagement, and Information Disclosure			
a.	Has the contractors provided contact details of focal persons in case of complaints using permanent signboards?	yes		
b.	Are the contact details readable and understable by target audience?	yes		
c.	Are the workers (contractors and subcontractors) informed of the GRM?	Yes		

Monitoring/Inspection Questions		Yes/ No/ Not applicable (n/a)	Observation/ Reason/ Justification	Required Action
d.	Have the PIU, supervising consultants, and contractors provided EHS-related information to local communities, business, and sensitive receptors?	Yes		
e.	Are EHS records/documents readily available at the site, to the inspection team, and stakeholders?	Yes		
	Other Issues/Concerns			
	Red Flags:			

Name of Inspector/s:		**Name of PMO/PIU Staff:**	
Designation:		**Designation:**	
Contractor Site Manager:		**DSC/CSC National Envi Specialist:**	
Contractor Envi Officer:		**DSC/CSC International Envi Specialist:**	
Contractor Health and Safety Officer:			

Appendix II – Non-Conformity Tracking Report

temelsu uluslararası MÜHENDİSLİK HİZMETLERİ A.Ş.
international ENGINEERING SERVICES INC.

Issyk-Kul Wastewater Management Project

Non-Conformity Tracking Report

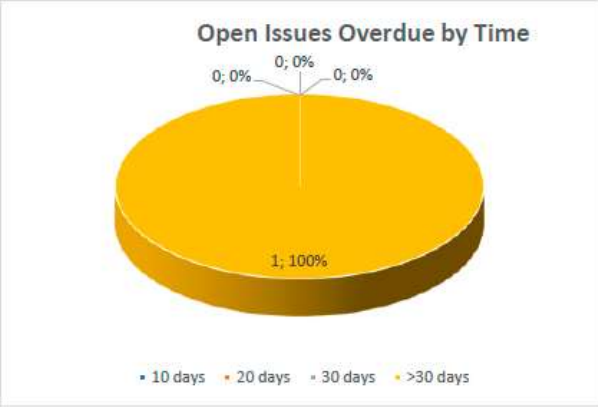
Country	Kyrgyzstan
Project Location	Issyk - Kul Province
Project Name	Issyk-Kul Wastewater Management Project
ADB Project No.	0628-KGZ (SF)
ADB Loan No	
Project Start Date	June / 2019
Anticpated Project End Date	31 December/ 2024
Project Implementation Unit Name	Issyk-Kul Wastewater Management Project Office (PMO)
Person Responsible for Tracking	Kylychbek Zhundubaev
Date of Closure	

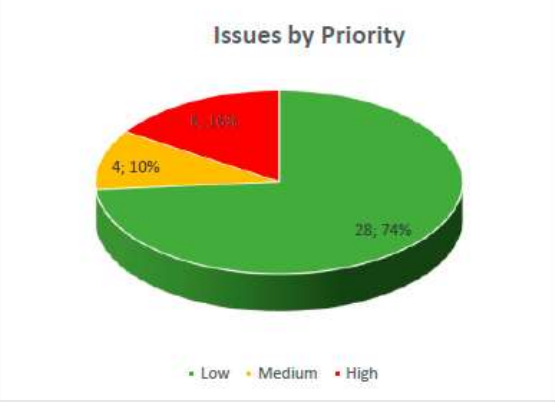
No	Site/Location	Date Recorded	Category	Description of Issue	Corrective Action/s	NCN No	NC Level	Due Date	Priority	Person Responsible	Status	Date Closed
1	Lot2 NW Balykchy (PROFIT EXPRESS)	30.03.22	Health	staff are not aware of the first aid kit	Inform the staff where the first aid kit is stored	N1	Minor	04.04.22	Low	Zhyldyz Moldosanova	Closed	02.04.22
2	Lot1 NW Balykchy (IMPULSE OSH)	30.03.22	Health	staff are not aware of the first aid kit	Inform the staff where the first aid kit is stored	N2	Minor	04.04.22	Low	Bekmamat Japiev	Closed	04.04.22
3	Lot1 NW Balykchy (IMPULSE OSH)	30.03.22	Safety	Trench excavation is not secured	Bring the bridges in compliance with safety requirements	N3	Minor	04.04.22	High	Bekmamat Japiev	Closed	04.04.22
4	Lot1 NW Karakol (PE Minur LLC)	27.04.22	Environment	Bio-toilet missing	Install a bio-toilet	N4	Minor	04.05.22	Low	Bekzat Shergazievich Dadybaev	Closed	02.05.22
5	WWTP Balykchy (CRBC)	20.06.22	Other	Some excavation, some lean concrete, some part of steel works etc. have been implemented without approval / permission / inspection of DSC. IEE and SSEMP has not been approved yet.	Design should be approved	N5	N/A	25.07.22	Medium	Contractor's Project Manager	Closed	27.07.22
6		20.06.22	Other		Excavation plan should be submitted		N/A	15.07.22	Medium	Contractor's Project Manager	Closed	01.07.22
7		20.06.22	Other		Lean concrete quality and thickness testes should be made		N/A	15.07.22	Medium	Site Manager	Closed	04.07.22
8		20.06.22	Other		Corroded steel bars should be removed		N/A	25.07.22	Low	Site Manger	Closed	05.09.22
9		20.06.22	Other		Steel tests should be made		N/A	15.07.22	Low	Site Manger	Closed	01.07.22
10		20.06.22	Other		All local authority permits		Major	15.07.22	High	Project Manager	Closed	10.07.22
11		20.06.22	Environment		IEE, EMP and SSEMP should be approved		Major	15.07.22	High	???	Closed	02.09.22
15	Lot1 NW Karakol (PE Minur LLC)	05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.	N6	N/A	12.08.22	Low	Site Manager	Closed	06.08.22
16	Lot1 NW Balykchy (IMPULSE OSH)	04.08.22	Safety	There is no fencing of open hatches.	Protect or close all hatches and pits that pose a danger.		Major	11.08.22	High	Contractor's Project Manager	Closed	09.08.22
17	Lot1 NW Balykchy (IMPULSE OSH)	04.08.22	Other	Excess soil is located on the site.	Remove all excess soil	N7	N/A	11.08.22	Low	Contractor's Project Manager	Closed	10.08.22
18	Lot2 NW Balykchy (PROFIT EXPRESS)	04.08.22	Safety	Workers should always be in a PPE	Provide workers with PPE and monitor their use.	N8	Minor	05.08.22	Low	Site Manager	Closed	05.08.22
19	Lot2 NW Karakol (JV Inzhenernaya Zashchita LLC)	05.08.22	Environment	Clogging of the soil with bitumen heating products	Clean up all places of contamination. To provide a platform for bitumen works, which will have a sand or soil cushion.	N9	N/A	12.08.22	Low	Site Manager	Closed	10.08.22

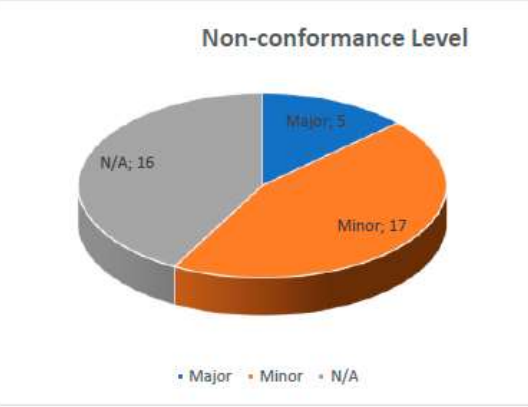
20		05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.		N/A	12.08.22	Low	Site Manager	Closed	06.08.22
21	Lot1 NW Karakol (PE Minur LLC)	05.08.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.	N10	N/A	12.08.22	Low	Site Manager	Closed	06.08.22
22	WWTP Balykchy (CRBC)	15.09.22	Safety	Debris on the way to the shower and toilet.	Clear the way to the shower and toilet.	N11	Minor	16.09.22	Medium	Site Manager	Closed	29.09.22
21	Lot1 NW Balykchy (IMPULSE OSH)	15.09.22	Environment	There is no toilet	The toilet should always be on the construction site		Minor	17.09.22	Low	Site Manager	Closed	19.09.22
22		15.09.22	Other	Remove excess soil	Excess soil is taken to a special site	N12	N/A	17.09.22	Low	Site Manager	Closed	19.09.22
23	Lot1 NW Karakol (PE Minur LLC)	16.09.22	Environment	No trash cans	Garbage cans should always be on the construction site	N13	Minor	16.09.22	Low	Site Manager	Closed	19.09.22
24	Lot2 NW Karakol (JV Inzhenernaya Zashchita LLC)	16.09.22	Environment	Workers work without PPE	Workers should always be in a PPE on the construction site	N14	Minor	16.09.22	Low	Site Manager	Closed	19.09.22
27		16.09.22	Health	A first aid kit should always be on the construction site.	Ensure that the first aid kit is located.		N/A	16.09.22	Low	Site Manager	Closed	19.09.22
28		16.09.22	Environment	there is no toilet	Install a bio toilet on a construction site		Minor	18.09.22	Low	Site Manager	Closed	22.09.22
29	WWTP Balykchy (CRBC)	28.09.22	Health	Dormitories are not in proper condition	To bring the rooms for workers in proper condition: make the floor, bring the beds into conformity (install beds of the right length), place the necessary shelves for belongings	N15	Major	21.10.22	High	Contractor's Project Manager	Open	
30	WWTP Balykchy (CRBC)	26.10.22	Environment	Site should be cleaned	remove garbage located on the site	N16	Minor	01.11.22	Low	Site Manager	Closed	29.10.22
31		26.10.22	Environment	Oil leaks	Fix oil leaks of machinery operated at WWTP, maintain construction machinery in the proper condition throughout construction works		Minor	01.11.22	Low	Site Manager	Closed	31.10.22

32		26.10.22	Health	Kitchen not in hygienic conditions	Arrange a canteen in the room next to the kitchen to meet the sanitary-hygienic requirements		Major	26.11.22	High	Contractor's Project Manager	Closed	31.10.22
33	Lot1 NW Balykchy (IMPULSE OSH)	26.10.22	Environment	A portable toilet is not available	Install a bio toilet on a construction site	N17	Minor	03.11.22	Low	Site Manager	Closed	27.10.22
34	Lot1 NW Karakol (PE Minur LLC)	27.10.22	Environment	Portable toilet was hit by a car and does not exist	Supply a new toilet	N17	Minor	04.11.22	Low	Site Manager	Closed	28.10.22
35	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	27.10.22	Other	The information board was broken	Provide a new board	N18	N/A	03.11.22	Low	Site Manager	Closed	01.11.22
36	Lot1 NW Balykchy (IMPULSE OSH)	27.11.22	Environment	There is no toilet	The toilet must be permanently located on the construction site	N19	Minor	27.11.22	Low	Site Manager	Closed	30.11.22
37	Lot2 NW Balykchy (PROFIT EXPRESS)	24.11.22	Environment	There is no toilet	Install a bio toilet	N20	Minor	24.11.22	Low	Site Manager	Closed	28.11.22
38	Lot1 NW Karakol (PE Minur LLC)	27.11.22	Other	There is no information board	Information board should be installed	N21	N/A	27.11.22	Low	Site Manager	Closed	30.11.22
39	Lot2 NW Karakol (JV Inzhenernaya Zashchıta LLC)	27.11.22	Other	Safety log not proper	The logs must meet the requirements	N22	N/A	27.11.22	Low	Site Manager	Closed	28.11.22
40	WWTP Balykchy (CRBC)	26.11.22	Environment	Construction debris and household garbage	Garbage should be cleaned daily	N23	Minor	26.11.22	Low	Site Manager	Closed	27.11.22
41		26.11.22	Safety	There is no safety log on the construction site	The safety log must be at the construction site		N/A	26.11.22	Low	Site Manager	Closed	27.11.22

Date of Last Report	30.06.22
Date of This Report	30.12.2022







Summary Tables

Total Number of Issues for Project	38
Number of Open Issues	1
Number of Closed Issues	37
Percentage Closed	97%
Issues Opened This Reporting Period	27
Issues Closed This Reporting Period	26

Issues Closed On Time	21
Percentage by Closed Issues	57%
Percentage by Open Issues	43%

Average Day Open For All Issues	53
Average Day Open For Open Issues	102
Average Days to close	10

Issues By Category

Environment	14
Social	0
Health	8
Safety	5
Other	11