Environmental Monitoring Report

Semestral Report
July – December 2016
December 2016

AZE: Water Supply and Sanitation Investment Program – Nakhchivan City Water Supply and Sewerage Subproject (Tranches 2 and 3)

Prepared by State Amelioration and Water Management Committee, Government of Republic of Azerbaijan for the Asian Development Bank.

CURRENCY EQUIVALENTS

(As of 1 December 2016)

Currency Unit – Azerbaijan New Manat (AZN)

AZN 1.00 = USD 0.5774
USD 1.00 = AZN 1.7318

ACRONYMS

ADB	:	Asian Development Bank
AR	:	Autonomous Republic
ECO	:	Environmental Control Official
EIA	:	Environmental Impact Assessment
EMP	:	Environmental Management Plan
EMU	:	Environmental Management Unit
IEE	:	Initial Environmental Examination
Km	:	Kilometer
m^3	:	Cubic meter
Mg/L	:	milligrams per liter
Mld	:	Million liter per day
MENR	:	Ministry of Ecology and Natural Resources
M&E	:	Monitoring and Evaluation
NAR	:	Nakhchivan Autonomous Republic
PIU	:	Project Implementation Unit
PMF	:	Project Management Facility
PMO	:	Project Management Office
Project	:	Nakhchivan City Water Supply and Sewage Project
SAWMC	:	State Amelioration and Water Management Committee
SEE	:	The State Ecological Expertise
SNIP	:	Construction Norms and Regulations of Azerbaijan
WSS	:	Water Supply and Sewage
WTP	:	Water Treatment Plant
WWTP	:	Wastewater Treatment Plant
WHO	:	World Health Organization

CONTENTS

I. INTRODUCTION

A. Introduction to the Project

1. The Azerbaijan Water Supply and Sanitation Investment Program is being cofinanced by the Government of Azerbaijan and the Asian Development Bank through a multitranche financing facility (MFF) involving several tranches. The Tranche 1 Nakhcivan subproject of the Investment Program included partial construction of Water Supply and Sewerage (WSS) network of the City and construction of a new Water Treatment Plant (WTP). Construction Work under Tranche 1 has been completed.

2. The Tranche 2 Nakhcivan subproject of the Investment Program, which was signed on 06.06.2012, aims construction of remaining WSS network of the City; construction of WSS network of Shixhmahmud, a small town located close to the new WTP; and construction of a new Waste Water Treatment Plant (WWTP) for Nakhchivan City.

3. The Tranche 3 Nakhcivan subproject of the MFF, which was started on 28.05.2015, aims construction of WSS network of 5 periurban towns of Nakhcivan City.

4. The Asian Development Bank (ADB) assisted The State Amelioration and Water Management Committee (SAWMC) of Nakhcivan AR for the Water Supply and Sanitation Subproject- Tranche 1 through its financing under Loan 2571-AZE; Subproject-Tranche 2 through its financing under Loan 2842-AZE; and Subproject-Tranche 3 through its financing under Loan 3049-AZE . Two procurement packages exist under Loan 2571-AZE in Tranche 1, four procurement packages exist under Loan 2842-AZE in Tranche 2, and one procurement package exists under Loan 3049-AZE in Tranche 3:

- **Tranche 1**

Contract-1 (L-42408-ICB-2.02): Construction of 21.5 km of water network with fire fighting hydrants and house connections, 18.3 km of sewage network with manholes and house connections, and a 10,000 m^3 concrete water reservoir.

Contract-2 (L-42408-ICB-2.03): Construction of Nakhcivan City water treatment plant with 40,000m^3/day capacity

- **Tranche 2**

Contract-3 (MFF-033-T2-ICB-1.04): Construction of 76.8 km of water network with fire fighting hydrants and house connections, 65.5 km of sewage network with manholes and house connections.

Contract-4 (MFF-033-T2-ICB-1.05): Construction of 85.7 km of water network with fire fighting hydrants and house connections, 71.0 km of sewage network with manholes and house connections.
Contract-5 (MFF-033-T2-ICB-1.06): Construction of Nakhcivan City wastewater treatment plant with 31,850 m^3/day average capacity.
Contract-6 (MFF-033-T2-ICB-1.07): Construction of water supply and sewage networks of Shixhmahmud town.

- **Tranche 3**

Contract-7 (MFF-043-T3-ICB-1.01): Construction of water supply and sewerage networks in periurban towns of Nakhcivan City.

5. The construction works under Contract-1, Contract-2, Contract-3 and Contract-4 were succesfully completed in September 2011, May 2013, October 2013 and January 2015, respectively. The Contract 5, which was signed on 5th of June 2014, is ongoing with a completion rate of 96.23 %. The Contract 6, which was signed on 30 November 2015, is ongoing with a completion rate of 97.16 %. The Contract 7 that was signed on 30 November 2015 is ongoing with a completion rate of 100 %.This Report (Bi-Annual Environmental Monitoring Report) is prepared for the time period from 01 July 2016 to 31 December 2016.

B. Objectives of the Biannual Environmental Reporting

6. The purpose of the Biannual Environmental Monitoring Reports is to provide a summary of the key issues relating to environmental management over the past six months. The summary includes an update on overall project progress, the status of SSEMP implementation, any progress made with environmental management, environmental monitoring results, and other relevant issues such as non-compliance and corrective actions, and monitoring of the Grievance Redress Mechanism (GRM).

7. The Reports are prepared by SAWMC and are intended to inform ADB and any other interested parties of the status of environmental management of the project. The Reports are summaries; more detailed information is included in the monthly and quarterly reports prepared by the Contractors and the Engineer.

C. Methodology

8. The Biannual Environmental Monitoring Reports are prepared by reviewing and extracting key information from a number of sources, as follows:

- Contractors' Monthly Environmental Management Reports;
- Engineer's Quarterly Progress Reports;
- PIU Environmental Specialist's Field Reports;
- Monthly instrumented monitoring results; and
- Correspondence between SAWMC, Engineer and Contractors relating to environmental and social issues.

9. In addition, some information and opinion in the reports result from site visits, technical meetings and public interviews over the preceding six months.

D. Project Organization

10. Project organization for the awarded contracts under MFF listed above is given in the table below.

Contract	Employer	Contractor	Engineer	Phase
Contract-1 (L-42408-ICB-2.02)	SAWMC	Gemiqaya Shirketi LLC	Yolsu Engineering Services Ltd. Co.	%100 Completed
Contract-2 (L-42408-ICB-2.03)		Gemiqaya Shirketi LLC & Denizsu - Joint Venture		%100 Completed
Contract-3 (MFF-033-T2-ICB-1.04)		Gemiqaya Shirketi LLC		%100 Completed
Contract-4 (MFF-033-T2-ICB-1.05)		Gemiqaya Shirketi LLC		%100 Completed
Contract-5 (MFF-033-T2-ICB-1.06)		Dizayn İnshaat & Bioworks - Joint Venture		Ongoing (% 96.23 completed)
Contract-6 (MFF-033-T2-ICB-1.07)		Cahan İnshaat LLC		Ongoing (% 97.16 completed).
Contract-7 (MFF-043-T3-ICB-1.01)		Dizayn İnshaat LLC		%100 Completed

E. Construction Activities and Project Progress During Previous 6 Months

11. The construction activities continued in this period, only under Contract 5. Table 1 below shows the Contractors's monthly progress throughout the current reporting period. The civil works within this period comprised mainly construction of water basins and other structures of the WWTP, including administration building, blower room, pump rooms, sludge dewatering structure, MBR building and transformer&generator building. Also most of the yard piping was installed in place. Mechanical installation works were also started.

Table 1: Monthly Progress of the Contractor During the Last Six Months

Month	Contract-5 Cumulative Progress (%)	Contract-6 Cumulative Progress (%)	Contract-7 Cumulative Progress (%)
July 2016	79,55	71,42	96,51
August 2016	86,92	80,47	98,35
September 2016	91,35	87,56	99,41
October 2016	93.36	93.30	100
November 2016	94.90	95.35	100
December 2016	96.23	97.16	100

12. The construction activities affecting the environment were as follows:

(1) Trenching and excavation,

(2) Removal of soil

(3) Pipe installation

(4) Backfilling and compaction

(5) Concrete works, including rebar and formwork works.

13. The following items were monitored during the implementation of the project.

(1) Noise

(2) Water Quality

(3) Air Quality

(4) Flora - Fauna

(5) Waste disposal

14. The subproject construction site of Contract 5 is government property, allocated to be the WWTP area. There is no protected areas, wetlands, mangroves, or estuaries. There is no land acquisition and relocation of people. Vegetation (mostly grasses), in the subproject site is those commonly found in the area. The geological structure of the area is stable, the plant site is flat, and no potential land subsidence is foreseen.

F. Environmental Management Team

15. An environmental control official (ECO) exists under the PIU of SAWMC: Mr. Orxan Seferov. The consultant has a local environmental specialist, Mrs. Hilal Qasımov on site for supervision and monitoring of the Environmental Management Plan, together with the ECO.

16. The Contractor's Environmental Officer is Nahid Huseynov, for Contract 5.

17. The Contractor's Environmental Officer is Faraj Ismayilov, for Contract 6.

18. The Contractor's Environmental Officer is Ali Ismayilov, for Contract 7.

G. Relationships with Contractors, Owner, Lender and Engineer

19. The relationships between Contractors, Engineer, Owner, and Lender are considered normal working relationships.

20. At the working level, communication with regards to environmental issues remains good.

II. ENVIRONMENTAL MONITORING

A. Status

21. Regular monthly monitoring has been carried out in accordance with the SSEMP throughout the current reporting period.

22. Regular air, noise and dust measurements have been carried out by both the Contractor and the PIU ECO.

B. Results

a) Noise

23. The ECO has regularly monitored the noise levels with hand held decibelmeters, both from a distance of 5m from the noise source and from the nearest residential and/or industrial area. The measured noise levels were found to be far below the maximum allowable noise levels provided in the IEE and SSEMP (i.e. 50 db for industrial areas and 40 db for residential areas). The full results are provided in Appendix 1.

24. The Contractor employed practical means to minimize noise resulting from construction work. Noise was minimized through proper maintenance of equipment and vehicles.

25. All construction tasks were carried out during unrestricted hours (09.00 to 18.00) Monday to Saturday, excluding general holidays

26. Heavy vehicles used for the purpose of the Works were required to be equipped with exhaust silencers. No diesel heavy construction equipment were kept running idle for more than five minutes.

27. Machines in intermittent use were being shut down in the intervening period between works or throttled down to a minimum.

28. The Contractor had organized his operations at the start of the project with regard to the positioning of plant and movement of vehicles to minimize noise adjacent to properties. This organization is planned to continue until the end of the project.

29. Special consideration have been provided to protect workers from harmful and long exposures to noise originating from construction machinery such as the wearing of earmuffs for operators.

30. Handling of construction materials were done during daytime.

b) Water Quality

31. No construction work took place around natural bodies of water like rivers, streams, etc. The nearest water body in the region is Araz River, which is approximately 1.5 km south of the project site. Araz river is a very large water body and its water quality is largely dependent on the upstream water quality. No water samplings were needed to be taken at the Araz River, since it is impossible to monitor or identify any effects of the construction on the Araz River.

32. There are few drainage ditches around the project site. These ditches are, in general, empty. Only, in heavy rain events, or during irrigation of nearby farms, excess run-off water may flow to the ditches. Daily visual inspections and monitorings of these ditches were perfomed. From the inspections, no issues were reported during this six months period.

33. All works have been undertaken in a manner that no debris, slash, wood chips, organic debris, soil, petroleum, diesel fuel, oil, grease, ashes, or other substances deleterious to environment was allowed to enter any water bodies. Solid Construction material and spoil stockpiles were covered to reduce material loss and run-off.

c) Air Quality

34. All air quality monitoring results for all determinants and all monitoring stations were below Azeri national standards during the present reporting period. Particulate, NO2 and CO readings were taken regularly at the project site. The full results are provided in Appendix 1. In dry and windy days where spreading of dust may occur; the ground surfaces were sprayed with water using water trucks equipped with sprinklers or any other appropriate means.

35. 30 km/h speed limit was set for movement of heavy construction vehicles on access roads. All excavation works, and loading/unloading operations were stopped when wind speed exceeded 12 km/s.

36. There are no concrete plants at the site. Ready mix concrete was delivered with trucks from the nearest concrete plants in Nakhcivan. Hence no dust issues were observed at the WWTP site. All construction activities were executed in such a way that will minimize if not totally eliminate the spreading of dust or any inconvenience and nuisance to nearby communities.

d) Flora and Fauna

37. The Contractor did not encounter any Flora or Fauna at the construction sites, there is no Flora during the execution of the Works.

e) Waste Disposal

38. All solid wastes were properly packaged, and disposed at the designated waste disposal site of the City. The site was designated by MENR, and was located 8 km north-west of the City. Waste containers were placed in every construction site and worker camps. These containers were daily collected and disposed lawfully.

C. Action

39. No action is required on ongoing Contractor in response to the monitoring results from the present reporting period.

III. ENVIRONMENTAL MANAGEMENT

A. Status

40. Environmental management of the project has continued to be of an acceptable standard during the present reporting period. General cleanliness of the project site is good, and the physical mitigation measures set out in the SSEMP are generally all constructed and functioning as designed. Activity-based mitigation measures are also being implemented.

41. There have been no accidents during the reporting period involving the public or workers.

B. Documents

42. The Contractor submitted monthly statements to the PIU describing their environmental monitoring and management activities. Reporting was generally compliant. All relevant paperwork, including SSEMP and the Grievance Register, was present at the site office, at the time of site visits performed by the ECO.

C. Inspections and Audits

43. The ADB's environmental specialists as well as the project team have visited the site numerous times in the past six months. During the visit in August, the SSEMP was found to be missing in the Contractors site office. Necessary actions were taken immediately.

44. In the other site visits of the ADB team in this reporting period, no non-compliances were observed.

45. PIU Environmental Control Official performed daily site visits to the project site. In addition, the consultants' local environmental specialist were on site daily to monitor safeguard measures and to take actions when needed.

D. Non-compliance and Corrective Actions

46. The Contractor has continued the construction works on site over the past six months within the bounds of the SSEMP; all works were compliant, and the site was clean, tidy, and well maintained. General view of the project site is shown in Figure 1 below.

Figure 1: General Views of the site

47. Dust control in general was observed to be appropriate, with trucks frequently observed at the project site; examples are shown in Figure 2 below.

Figure 2: Dust Control at Project site

48. Air quality and noise monitorings were done frequently on the project site. Below are few examples of monitoring works.

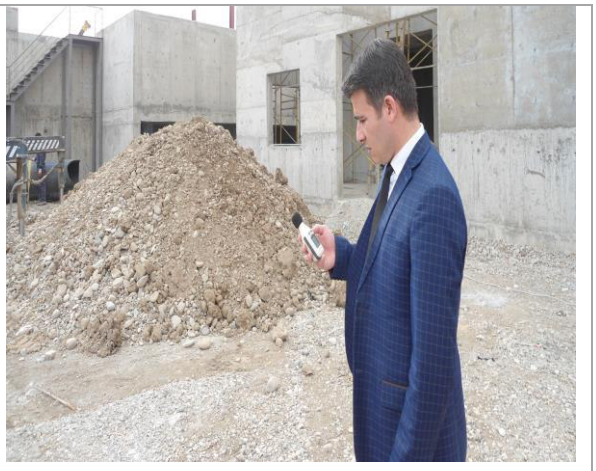

Figure 3: Noise and Dust Measurement Equipment at Project site

49. Stocking of materials and equipment was found to be appropriate. Below are few examples of stocked pipes and equipment on site.

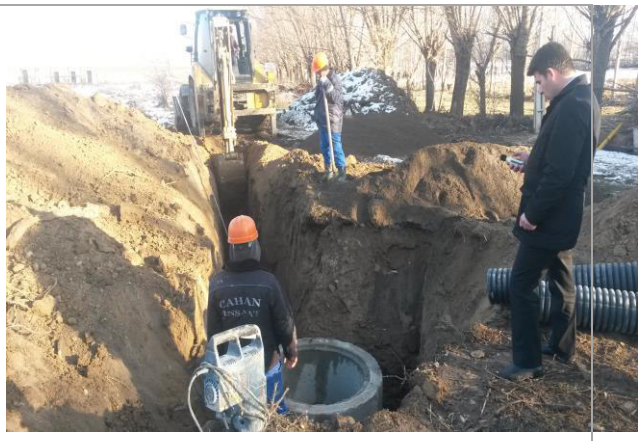

Figure 4: Noise and Dust Measurement Equipment at Pipeline construction on site

E. Consultation and Complaints

50. Environmental management of the project has continued to be of an acceptable standard during the present reporting period. General cleanliness of the project site is good, and the physical mitigation measures set out in the SSEMP are generally all constructed and functioning as designed. Activity-based mitigation measures are also being implemented.

51. During the present reporting period a public consultation was held on the following date at the Contractor Camp. The Executive Authority and the Engineer also attended the meeting.

F. Emerging Issues

52. No emerging issues were reported during the report period.

G. Conclusions

53. Environmental management of the project has continued to be of an acceptable standard during the present reporting period. General cleanliness of the project site is good, and the physical mitigation measures set out in the SSEMP are generally all constructed and functioning as designed. Activity-based mitigation measures are also being implemented.

54. No complaints were received during the report period. Although the overall work has not progressed as per the project schedule, mostly due to the delays in the arrival of mechanical equipment from Europe, the Contractor have completed most of the civil works as planned. The mechanical installation works are also progressing in fast track to match the revised project schedule.

55. Document-level compliance and level of public consultations was assessed as good within present reporting period. Contractor tries to follow SSEMP requirements. Contractos's reports were also in an acceptable level.

APPENDIX 1: ENVIRONMENTAL MONITORING RESULTS

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

July2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 01.07.2016 to 29.07.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
Waste monitoring impact	Waste segregation and storage	Monthly inspections	impact monitoring, compliance monitoring	waste was carried into special containers	ESM, Supervision engineer ,contractor
Quality of water	Quality\Pollutant concentration	Continous	compliance with the lisence requirements	Water quality was not changed	ESM, Supervision engineer ,contractor
Ecological resources	Local Fauna and Flora	Continous	Minumum environmental impact	No impact was observed	ESM, Supervision engineer ,contractor
Surface	Land monitoring and erosion control	Continous	Minumum environmental impact	Was compliant with the requirements	ESM, Supervision engineer ,contractor
Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

Excavating foundation of adminstrative building, laying preparation of gravel-concrete , armaturing of foundation, laying molding- concrete, as well as armaturing of walls in adminstrative building, laying concrete for molding and columns have been fulfilled in Nakhchivan Waste Water Treatment Plant within July. Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (66 dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

August 2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 01.08.2016 to 31.08.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
Waste monitoring impact	Waste segregation and storage	Monthly inspections	impact monitoring, compliance monitoring	waste was carried into special containers	ESM, Supervision engineer ,contractor
Quality of water	Quality\Pollutant concentration	Continous	compliance with the lisence requirements	Water quality was not changed	ESM, Supervision engineer ,contractor
Ecological resources	Local Fauna and Flora	Continous	Minumum environmental impact	No impact was observed	ESM, Supervision engineer ,contractor
Surface	Land monitoring and erosion control	Continous	Minumum environmental impact	Was compliant with the requirements	ESM, Supervision engineer ,contractor
Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

Armaturing concrete panels in chlorination tank, molding- concrete works and excavating of ground for covering concrete wells (manholes), preparation of laying concrete as well as molding- concrete works have been fulfilled in Nakhchivan Waste Water Treatment Plant within August.Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (67 dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

September 2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 01.09.2016 to 30.09.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
Waste monitoring impact	Waste segregation and storage	Monthly inspections	impact monitoring, compliance monitoring	waste was carried into special containers	ESM, Supervision engineer ,contractor
Quality of water	Quality\Pollutant concentration	Continous	compliance with the lisence requirements	Water quality was not changed	ESM, Supervision engineer ,contractor
Ecological resources	Local Fauna and Flora	Continous	Minumum environmental impact	No impact was observed	ESM, Supervision engineer ,contractor
Surface	Land monitoring and erosion control	Continous	Minumum environmental impact	Was compliant with the requirements	ESM, Supervision engineer ,contractor
Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

For site granding up of the plant, additionally sand and gravel works have been fulfilled in Nakhchivan Waste Water Treatment Plant within September. Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (69 dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

October 2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 03.10.2016 to 31.10.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
Waste monitoring impact	Waste segregation and storage	Monthly inspections	impact monitoring, compliance monitoring	waste was carried into special containers	ESM, Supervision engineer ,contractor
Quality of water	Quality\Pollutant concentration	Continous	compliance with the lisence requirements	Water quality was not changed	ESM, Supervision engineer ,contractor
Ecological resources	Local Fauna and Flora	Continous	Minumum environmental impact	No impact was observed	ESM, Supervision engineer ,contractor
Surface	Land monitoring and erosion control	Continous	Minumum environmental impact	Was compliant with the requirements	ESM, Supervision engineer ,contractor
Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

Excavating groundwork of water separator, gravel and preparation concrete layer, as well as armature, molding and concrete works have been fulfilled in Nakhchivan Waste Water Treatment Plant within October. Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (63dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

November 2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 01.11.2016 to 30.11.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
Waste monitoring impact	Waste segregation and storage	Monthly inspections	impact monitoring, compliance monitoring	waste was carried into special containers	ESM, Supervision engineer ,contractor
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Ecological resources	Local Fauna and Flora	Continous	Minumum environmental impact	No impact was observed	ESM, Supervision engineer ,contractor
Surface	Land monitoring and erosion control	Continous	Minumum environmental impact	Was compliant with the requirements	ESM, Supervision engineer ,contractor
Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

Fencing of fertilizer drying area, and the road which leads to the fertilizer drying area, laying gravel layer and its spreading- pressing works have been fulfilled in Nakhchivan Waste Water Treatment Plant within November. Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (61 dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N

Nakhchivan Water Supply and Sanitation Investment Program

"Construction of Nakhchivan City Wastewater Treatment Plant"

December 2016 - Ecological monitoring

The construction of Nakhchivan City Wastewater Treatment Plant has continued from 01.12.2016 to 30.12.2016. Ecological standards comliance was checked in the monitoring areas, workers were instructed and preventative measures were taken. The results of monitoring are in the following table:

Item	Indicator	Period	Active level	Measures undertaken	Responsibility
Environment air	Dust	Continous	General observation	The area was watered during dry weather	Environmental Supervision Management (ESM)engineer, contractor
Volume	Volume level	Rates per hour	weekly inspections	Volume level was within the norms	ESM, Supervision engineer ,contractor
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Landscape	Temporary surface structure cleanness	Once before the completion	Minimum diffusion to the original landscape	Complying with the adviced measure	ESM, Supervision engineer ,contractor

Providing with adminstrative and guard buildings with furniture sets,transporting of earth to the site for greenery and lawing Works have been fulfilled in Nakhchivan Waste Water Treatment Plant within December. Not any serious problem and disturbance case for people's normal daily life was found during the inspection. During construction works, according to sound level-meter the sounds made by used machines has not violated the norms (60 dBA for short term). Different kinds of waste produced by the workers and vehicles in the construction area, were transported to the special waste collectors made available by the government.

SAWMC, PMU, Monitoring and Assessment specialist — Safarov. O

Construction supervision engineer — Rzayev. T

Contractor specialist — Huseynov. N