

Environmental Monitoring Report

2020 1st Semestral Report
July 2020

ARM: Power Transmission and Rehabilitation Project

Prepared by the Closed Joint Stock Company Electro Power Systems Operator (EPSO) for the Republic of Armenia and the Asian Development Bank (ADB).

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Abbreviations

| | |
|-------|---|
| ADB | Asian Development Bank |
| ADSS | All Dielectric Self Supporting |
| AP | Affected People |
| BU DC | Back UP Dispatch Center |
| CC | Construction Contractor |
| CJSC | Closed Joint Stock Company |
| DIN | DeutschesInstitutfür Normung (German Institute for Normative) |
| EHS | Environmental, Health & Safety |
| EHSS | Environmental, Health & Safety Specialist |
| EHSMS | Environment, Health and Safety Management System |
| EIA | Environmental Impact Assessment |
| EMF | Electric and Magnetic Fields |
| EMP | Environmental Management Plan |
| EMR | Environmental Monitoring Report |
| EMS | Electro-Mechanical Systems |
| EPSO | Electro Power System Operator |
| FOC | Fiber Optic Cables |
| HPP | Hydro Power Plant |
| HSMS | Health and Safety Management System |
| HVEN | High Voltage Electric Networks |
| IA | Implementation Agency |
| IEC | International Electrotechnical Commission |
| IEE | Initial Environmental Examination |
| IFI | International Financial Institutions |
| kV | kilovolt |
| LLC | Limited Liability Company |
| LOTO | Lock-out Tag-out |
| LTI | Lost Time Incident |

| | |
|--------|---|
| MEHSMR | Monthly Environmental, Health & Safety Monitoring Report |
| MSDS | Material Safety Data Sheet |
| NCN | Non-Conformance Notices |
| NCL | Non-Conformance Level |
| NGO | Non-Governmental Organization |
| NPP | Nuclear Power Plant |
| OHL | Overhead Transmission Line |
| OLTE | Optic Line Terminal Equipment |
| OPAC | Optical Attached Cable |
| OPGW | Optical Ground Wire |
| PIA | Project Implementation Agency |
| PIC | Project Implementation Consultant |
| PIU | Project Implementation Unit |
| PPE | Personal Protective Equipment |
| RA | Republic of Armenia (Armenia) |
| R/C | Reinforced Cement/Concrete |
| RoW | Right of Way |
| SAEMR | Semi-Annual Environmental Monitoring Report |
| SCADA | Supervisory Control and Data Acquisition |
| SEMP | Site Specific Environmental, Social and Health & Safety Management Plan |
| SNCO | State Non-Commercial Organization |
| TE | Telecommunication Equipment |
| TNMS | Telecommunication Network Management System |
| ToR | Terms of References |
| TSM | Technical Coordination Meeting |
| USEPA | United States Environmental Protection Agency, |
| VO | Variation Order |
| WHO | World Health Organization |

1 INTRODUCTION

1.1 Preamble

The present Environmental Monitoring Report (EMR) summarizes the Environmental, Health & Safety status of project supervision 6 months, for the period of January - June 2020 by EPSO CJSC.

The report contains the following sections:

Part I. Introduction

Part II. Project description and current activities

Part III. Environmental Safeguard activities

Part IV. Results of environmental monitoring

Part V. Functioning of the Site-Specific Environmental Management Plan (SEMP)

Part VI. Good practice and opportunity for improvement

Part VII. Summary and recommendations, and

Annexes

The main accomplishments of assignment for the January - June 2020 period were:

Review of Contractor's Monthly EHS monitoring reports (MEHSMR) was carried out by Consultant (*see example of MEHSMR annex 1*).

Due to the new reality with COVID -19 Pandemic, State of Emergency in Republic of Armenia, and the shortage of Project Consultant EHS expert involvement days (10 days for 6 months) the following activities were not conducted:

Monitoring of SEMP implementation throughout the site visits, site inspection.

Regular meetings (monthly Technical Coordination/TCM and monthly Environmental, Health & Safety/EHS Meetings) organized by Consultant with Client and Contractor staff.

1.2 Headline Information

Under the Extension and Upgrade of the SCADA/EMS Sub-Project within the framework of "Power Transmission Rehabilitation Project", the following construction activities were implemented during the reporting period (January - June, 2020):

Back-Up Dispatch Center (BU DC) hand-over to EPSO done on February 19th, 2020 (see hand-over act, Annex 5).

Construction works on OPGW “Meghri-2” transmission line (from Agarak substation to Shinuhayr substation) under the Extension and Upgrade of the SCADA/EMS (hereby Project) within the framework of “Power Transmission Rehabilitation Project” was re-commenced on March 09th till April30th , 2020.

Note: Construction works on OPGW “Meghri-2” transmission line (from Agarak substation to Shinuhayr substation) was in list of authorized activities of RA Government during the State of Emergency.

Maps of active working locations for reporting period are presented in Annex 2.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

The Project area covers 5 regions (Shirak, Lori, Gegharkunik, Kotayk and Syunik) of the Republic of Armenia and Yerevan.

This Project is foreseen to complement the Supervisory Control and Data Acquisition (SCADA) system in Armenia's national grid by ADB funding. Thus, during the Project implementation the Contractor shall

- supply and install of new Fibre Optic Cables (FOC), deployed as follows:

- (i)OPGW (Optical Ground Wire) – at all around 211.5km length along 220 and 110 kV OHL the existing earth wires shall be replaced by an OPGW.

- (ii) ADSS (All Dielectric Self Supporting) - at an around 1.5km ADSS optical fibre cable shall be installed;

- (iii) OPAC (Optical Attached Cable), laid in underground trenches/cableways – at around 13.0 km additional OPAC or Underground Optical Cables shall be installed.

- (iv) Fibre Optic Line Terminal Equipment (OLTE),

- supply and install of Telecommunication Equipment (TE) such as SDH Add-and-Drop-Multiplexers, PDH multiplexers to collect low rate traffic, other network components,

- supply and install of telephone systems with digital PBX (IP-PBX) and subscribers' equipment,

- supply and install of telecommunication power supply equipment and equipment racks,

- supply and install of Telecommunication Network Management System (TNMS),

- construction of New Back Up Dispatch Centre (BU DC) at the address: 50 Admiral Isakov Avenue, Yerevan.

According to the Initial Environmental Assessment (IEE) the Project was considered as a Category B Project and not requiring an Environmental Impact Assessment (EIA).

The Project is not requiring acquisition of land. All construction activities of the BU DC are taken place within the properties of the existing facilities belonging to ENA.

The replacement of the usual earth wires by optical ground wires is take place at existing overhead lines using existing access roads.

The replacement of the earth wires is done not needing access to each single tower with trucks and the earth wires is not touch the ground during replacement.

The replacement of the existing earth wire by OPGW is done in a way that access with small trucks will be necessary only to angle towers.

All other towers in between is approachable only by footpath. The re-stringing works are not interfering with objects or terrain between the section towers.

In general, the main rehabilitation measures in the frame of Project activities will cover replacement and extension of electrical equipment, OPGW and OPAC, as well construction works of a new BU DC.

2.2 Project Contracts and Management

No changes in Project Contracts and Management. Due to the Covid-19 Pandemic and State of Emergency in RA monitoring of SEMP implementation throughout the site visits, site inspection and ..regular meetings (monthly Technical Coordination/TCM and monthly Environmental, Health & Safety/EHS Meetings) organized by Consultant with Client and Contractor staff were restricted.

The following Organizations are involved in this Project implementation as follows:

1. *Lender - Asian Development Bank (ADB)*
2. *Borrower - High Voltage Electric Networks (HVEN) and Electro Power System Operator (EPSO) CJSCs*
3. *Consultant - Project Implementation Consultant (PIC): Tractebel Engineering GmbH, CESI S.P.A. and AMERIA Consultant Joint Venture (Lahmeyer International GmbH/CESI S.P.A. /Ameria CJSC Consortium)*
4. *PIU - EPSO Program Implementation Unit*
5. *Contractor - Redinet CJSC and Siemens Aktiengesellschaft, Österreich Contractor Consortium*

EPSO as responsible IA for the two parts of the project recruited a Project Implementation Consultant. The national and international team assist EPSO as project supervision consultant on the rehabilitation Project. The Consultant also provides capacity building training to EPSO staff for project management, EHS supervision, operation and maintenance for the Project. Consultant assignment also includes the update of the environmental management and monitoring plans (EMPs) and detail environmental mitigation measures if changes in the design or additional works occur.

Within this Project two separate Specific Environmental Management Plans (SEMPs) have been developed by Contractor and reviewed by Consultant: one for the replacement of the ground wires by optical ground wires and second for the construction of BU DC. The EMPs contain mitigation and monitoring measures for the construction and for the operational phases. The Contractor is an entity responsible for the implementation of the SEMPs. Contractor's

Environmental, Health and Safety Specialist (EHSS) is responsible for developing, implementing and monitoring the SEMP procedures. Contractor staff is responsible for managing the SEMP.

Contractor as part of SEMP Implementation is responsible for preparing monthly EHS/Safeguard Monitoring Reports including the progress of the implementation of the Environmental Management Plan (EMP). These reports are submitted to EPSO and PIC for review and recommendations. Final versions of these reports shall be distributed to all involved departments. The reports shall contain all discrepancies from the EMP and list all EHS relevant incidents and accidents, registered grievances and grievance redress report (if any) that occur during the implementation of the project.

Based on these reports and on own construction site inspections/audits the Consultant (PIC) together with EPSO prepare semi-annual environmental monitoring reports (SAEMR) and submit them to ADB.

The environmental costs for upgrading of the SCADA system will add up to about 99,000 USD. BU DC construction Contract Number EPSO—220, and was included in the upgraded Project under loan Number 46416-002: Power Transmission Rehabilitation Project (46416-001) as Variation Order (VO) and didn't raised/exceed loan amount.

The following personnel are involved to conduct EHS management/supervision and Monitoring requirements of the Project:

- 1. Lender/ADB**—Mr Armine Yedigaryan, Environmental specialist in Central and West Asia; Asian Development Bank: ayedigaryan@adb.org, [Telephone: 010-54-63-70/71/72/73 ext. 103; e-mail: ayedigaryan@adb.org
- 2. Borrower/EPSCO CJSC**—Mr. Mnatsakan Mnatsakanyan, General Director EPSCO CJSC, Project Manager; Address: 27, Abovyan Str., 0009 Yerevan, Republic of Armenia [Telephone: +37410 52 47 25; e-mail: office@energyoperator.am
- 3. Consultant (PIC)/ Tractebel Engineering GmbH, CESI S.P.A. and AMERIA Consultant Joint Venture**—Mr. Armen Bodoyan, EHS expert; Address: 54/3 Arshakuniats avenue, apt. 17, Yerevan-0061; Telephone: +37495 45 04 45, e-mail: armbod@yahoo.fr
- 4. PIU - EPSCO Program Implementation Unit**—Mr. Eduard Fatyan, Project EHS Responsible; Address: 27, Abovyan Str., 0009 Yerevan, Republic of Armenia; Telephone: +37498 70 98 77; e-mail: eduardfatyan@yandex.com
- 5. Contractor/ Redinet/Siemens Consortium** - Tigran Oganezov, EHS Specialist; Address: 24/7–24/8 Azatutyan Ave., Yerevan 0014, Armenia; Telephone: +37491 00 20 11; e-mail: toganezov@yahoo.com

2.3 Project Activities During Current Reporting Period

Under the Extension and Upgrade of the SCADA/EMS Sub-Project within the framework of “Power Transmission Rehabilitation Project”, the following construction activities were implemented during the reporting period (–January - June, 2020): Monthly distribution of construction activities in active working location for –January-June 2020 period are presented in annex 3.

Back-Up Dispatch Center (BU DC) hand-over to EPSO done on February 19th, 2020 (see hand-over act, Annex 5).

Construction works on OPGW “Meghri-2” transmission line (from Agarak substation to Shinuhayr substation) under the Extension and Upgrade of the SCADA/EMS (hereby Project) within the framework of “Power Transmission Rehabilitation Project” was re-commenced on March 09th till April 30th, 2020.

Note: Construction works on OPGW “Meghri-2” transmission line (from Agarak substation to Shinuhayr substation) was in list of authorized activities of RA Government during the State of Emergency.

Semi-annual distribution of activities for –January - June 2020 period are presented below in Table 1:

Photos and checklist are presented in annex 1 included in Monthly EHS Monitoring Reports (MEHSMR – PDF format)

Table 1: Type of construction works implemented during the July - December 2019 period

| Type of works | Section | Status of works |
|----------------------------|--|-----------------|
| Meghri-2 220kV OPGW | | |
| OPGW preparation | Section from 15-123, 124-131, 141- 167 | Finished |
| OPGW uprolling | Section from 15-123, 124-131, 141-154, 154-158, 158-162, 162-167 | Finished |

| | | |
|-----------------------|------------------------------------|-----------------------------------|
| OPGW fixing | Section from 148 - 167 | Finished |
| Buck Up Center | | |
| Hand over | Full construction and installation | Done (see Hand over Act, Annex 5) |

Below Table 2 presenting the semi-annual maximum and minimum average number of workers and anticipated changes in staff on all active construction sites: Back-Up DC, Meghri-2 220kV OPGW.

Monthly maximum and minimum numbers of workers worked and anticipated changes in staff on all active construction sites are presented in annex 4.

Table 2: Number of workers for July - December 2019 period

| Construction site | Working period | Number of workers in 2 nd semester 2019 | | Anticipated changes in staff in July -December |
|---------------------|--------------------|--|-------------------------|--|
| | | Minimum (average/month) | Maximum (average/month) | |
| Meghri-2 220kV OPGW | September-December | 8 persons | 12persons | The average number of workers increased- 3 |

2.4 Description of Any Changes to Project Design

No changes to the project design, at the same time EPSO was submitted request to extend the project implementation till July 2020, as a result of the non-completion of OPGW installation works due to the weather condition and electrical supply switch-over permits delays by Armenian HV Electrical Network – HVEN and got approval from ADB.

As well, request for Extension of the project with additional OPGW installation at Tatev 110kV, Nairit 110 kV, Nairi 220 kV, Erebuni 220 kV OHLs was submitted to ADB by EPSO. In this frame, Initial Environmental Examination upgrade/review was ordered and conducted by PIC HSE expert and submitted to ADB for approval end of December 2019 and approved in March 2020.

The Project Extension Contract finalization with Construction Contractor and Consultant are ongoing.

2.5 Description of Any Changes to Agreed Construction methods

No changes to agreed construction methods. the existing project extension and additional OPGW installation at at Tatev 110kV, Nairit 110 kV, Nairi 220 kV, Erebuni 220 kV OHLs will be done with agreed construction methods and means. Site Specific Environmental Management Plan for Project extension will be developed and submitted by Construction Contractor to Consultant review and ADB for approval next quarter.

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

Contractor's Environmental team implemented the following environmental safeguard works during the reporting period.

Contractor EHS specialist organized and conducted regular environmental monitoring and inspection visits to construction sites.

Contractor EHS specialist organized and conducted EHS trainings and toolbox meetings

Contractor EHS team drafted and submitted to the Consultant Monthly EHS reports

Contractor developed and implemented relevant Mitigation Measures where appropriate.

Posters with project information contacts and how the community inhabitants may apply in case of the complaints, suggestions or questions arise during the construction process, are posted at Contractor's mobile house, administrative buildings of communities. Complaints register was available in mobile houses in the construction sites.

Due to the Covid-19 Pandemic and State of Emergency in RA the Consultant EHS expert monitoring and inspection site visits and regular monthly EHS meetings have been restricted.

Below in table 3 presented the list of Environmental activities and documents submitted for the January -June2020 reporting period

Table3. List of monthly EHS activities and documents for July - December 2019 period

| Month | Environmental safeguard activities | EHS documentations |
|-------|---|---|
| March | - Remote discussion with and instruction from Consultant team on issues of COVID 19 infection risks and disease prevention methods held on March 6 th , 2020 | - Back Up Dispatch Center Handover Act was submitted to Consultant. |
| April | Remote discussion with and instruction from Consultant team on issues of COVID 19 infection risks and disease | - Monthly Environmental, Health and Safety report for March was submitted to Consultant on 7 of April 2020 - EHS Checklist, None-Conformances and required Mitigation measures documents |

| | | |
|-----|---|---|
| | prevention methods on April 8 th , 2020 | carried out for Meghri-2 220 kV OPGW active sites (included in March Monthly EHS Monitoring Report) |
| May | | <ul style="list-style-type: none">- Monthly Environmental, Health and Safety report for April was submitted to Consultant on May 8th, 2020.- EHS Checklist, Non-Conformances and required Mitigation measures documents carried out for Meghri-2 220 kV OPGW active sites (included in April Monthly EHS Monitoring Report) |

No Construction activities conducted during May – June 2020 period, due to the electrical supply switch-over permits delays by Armenian HV Electrical Network – HVEN.

3.2 Site Audits

During the –January – June 2020 reporting period any Formal Audit was not undertaken by PIU and ADB staff.

Due to the new reality with COVID -19 Pandemic, State of Emergency in Republic of Armenia, and the shortage of Project Consultant EHS expert involvement days (10 days for 6 months) the EHS monitoring and inspection activities were restricted.

It is important to note that during the January – June 2020 reporting period and during the whole project implementation period any EHS reportable incidents/accident had not taken place.

3.3 Issues Tracking (Based on Non-Conformance Notices)

During the reporting period Contractor Environmental Health and Safety team organized and conducted environmental monitoring and Health and Safety inspection visits to construction sites. Inspections and monitoring activities were done according and based on the IEE and Site-Specific Environmental Management Plan (SEMP) requirements.

During the monitoring visit on 12-13 of March, 4-15 of April 2020 to the Meghri-2 OPGW construction site discrepancies were not recorded by Construction Contractor EHS specialists.

Summary of Issues Tracking Activity for January-June 2020 reporting period**Table 5.** Summary of Issues Tracking Activity for January - June 2020

| | Meghri-2 OPGW | Total for the Project for January – June 2020 |
|--|------------------|--|
| Total Number of Issues for Project | 0 | 0 |
| Number of Open Issues | 0 | 0 |
| Number of Closed Issues | 0 | 0 |
| Percentage Closed | 0% | 0% |
| Issues Opened This Reporting Period | 0 | 0 |
| Issues Closed This Reporting Period | 0 | 0 |

Site visits inspection checklists were filled in and were provided to the Consultant team as an EHS Compliance & Monitoring reports.

3.3.1 Grievance redress mechanism (GRM)

Posters with project information contacts and how the community inhabitants may apply in case of the complaints, suggestions or questions arise during the construction process, are posted at Contractor's mobile house. Complaints register - books were available in mobile houses in the construction site. In the reporting period complaints were not received.

3.4 Trends

Excellent improvement of compliance of SEMP requirements was demonstrated in compare with previous months (See table7) and previous semester (January-June 2019)

Table 6. Trends of issues for the period from January 2019 to June 2020

| Monthly Report | Total No of Issues | % issues Closed | % issues closed late |
|----------------|--------------------|-----------------|----------------------|
| January | 13 | 77 | 23 |
| February | 3 | 67 | 33 |
| March | 4 | 50 | 50 |
| April | 3 | 33 | 67 |
| May | 6 | 33 | 67 |
| June | 7 | 57 | 43 |
| July | 5 | 100 | 0 |
| August | 5 | 80 | 20 |
| September | 0 | 0 | 0 |
| October | 0 | 0 | 0 |
| November | 0 | 0 | 0 |
| December | 0 | 0 | 0 |

| | | | |
|---------------|-----|-----|-----|
| January 2020 | N/A | N/A | N/A |
| February 2020 | N/A | N/A | N/A |
| March 2020 | 0 | 0 | 0 |
| April 2020 | 0 | 0 | 0 |
| May | N/A | N/A | N/A |
| June | N/A | N/A | N/A |

Note: Construction works were temporarily stopped for the January-March 2020 period based on weather condition during winter season and May-June 2020 due to the electrical supply switch-over permits delays by Armenian HV Electrical Network – HVEN.

In the reporting period non-compliance notices were not issued by the Consultant.

3.5 Unanticipated Environmental Impacts or Risks

During the reporting period (-January - June,2020) the unanticipated environmental impacts and risks were not identified.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

Instrumental monitoring was not carried out during reporting period, since the works causing noise, vibration and dust were not implemented in OPGW installation sites.

During the January - June 2020 reporting period regular/announced, and randomly active site EHS inspections and monitoring have not been conducted by Consultant Due to the Covid-19 Pandemic and State of Emergency in RA. Only Contractor EHS staff conducted monthly monitoring and Inspection site visits to the Construction active sites.

4.2 Trends

During the reporting period (January - June. 2020) and whole project implementation period no major excess of noise level, vibration and air emission observed. Instrumental measurement will be organized and done at OPGW installation sites by contractor once a quarter by PIC and or ADB request, based on works type and location (heavy machinery use, none-paved road, close to the/in habitation, protected area etc.) for Project Extension activities initial stage (next quarter).

4.3 Summary of Monitoring outcomes

Based on visual monitoring satisfactory results conducted by Contractor's EHS staff as it was defined by IEE and SEMP and measures taken by Contractor like

- semi-annual inspection of machinery/trucks,
- limitation of working hours from 9:00am to 6:00pm,
- daily examination of equipment and mechanisms,
- etc.

are satisfactory.

As it was mentioned above, the Instrumental monitoring was recommended in active sites by ADB for Project Extension activities initial stage (August – September, 2020) in order to formally document compliance of the project with required standards and norms for air emission, noise and vibration at construction active sites.

During the reporting period (–January - June 2020) excess of noise level, vibration and air emission were not observed.

4.4 Material Resources Utilisation

4.4.1 Current Period

N/A

4.4.2 Cumulative Resource Utilisation

N/A

4.5 Waste Management

The following waste was generated and/ or removed during the reporting period:

Construction waste generated as a result of demolition of old grounding wires, which's are temporary collected in the Redinet LLC base in Yerevan before being handed over to HVEN. All used/empty coils of Fiber Optic Cables and dismantled/changed old equipment temporary collected in the Redinet LLC base in Yerevan before being handed over to EPSO. During reporting period Contractor were dismantled, transported to the storage area of Redinet CJSC base and were not handled over to HVEN CJSC and EPSO.

Solid waste (garbage) was collected in bins specially installed at construction site near mobile house, than was transported to the Redinet CJSC base in Yerevan and transported to the Nubarashen dump site by Kanaker-Zeytun Administrative district (according to the Payment invoice for 2020 years)

No hazardous wastes, no dangerous wastes were generated during the reporting period, January-June 2020.

The site was handed under the condition of further obligatory cleaning, improvement.

4.5.1 Current Period

The materials collected in the Redinet CJSC base were not handled over during reporting period.

4.5.2 Cumulative Waste Generation

N/A

4.6 Health and Safety

No incidents/accidents (LTI, MTI, Near Misses), Covid-19 infection cases occurred during the reporting period, Contractor staff has exceptional achievement with «Zero EHS Incident/accident» achievement started from the beginning/start of the project.

Contractor set out the action plan and prevention measures according to the RA government and WHO COVID 19 Pandemic Prevention recommendations.

Contractor's workers and staff were provided with and using job specific and COVID 19 prevention specific PPEs and means. All mechanisms and tools (set of hand tools, hand winch, counterweights, vibration dampener etc.) which were used by workers during reporting period were inspected and safe, in addition tools and mechanisms were periodically treated by disinfectant and alcogel.

Appropriate Health and safety, COVID 19 risks and prevention measures inductions were implemented during construction works in Meghri-2 220kV OPGW installation sites. The foremen of mentioned construction sites were instructed to keep the HS induction journals in the mobile houses in construction sites.

The workers were provided by sanitary-hygienic necessities within camp area; mealtime and winter rest facilities, washing and drinking water, as well they were instructed and provided with COVID 19 specific PPEs and means for prevention measures.

4.6.1 Community Health and Safety

No incidents/accidents, Covid-19 infection cases occurred during the reporting period and during the whole project implementation.

4.6.2 Worker Safety and Health

No incidents/accidents (LTI, MTI, Near Misses), Covid-19 infection cases occurred during the reporting period, Contractor staff has exceptional achievement with «Zero EHS Incident/accident» achievement started from the beginning/start of the project.

All Contractor's workers and staff were provided with and using job-specific and Covid-19 PPEs. All mechanisms and tools (set of hand tools, hand winch, counterweights, vibration dampener etc.) which were used by workers during reporting month were inspected and safe.

Appropriate Health and safety inductions were implemented during construction works in Meghri-2 220kV OPGW installation sites. The foremen of mentioned construction sites were instructed to keep the HS induction journals in the mobile houses in construction sites.

The workers were provided by sanitary-hygienic necessities within camp area; mealtime and winter rest facilities, washing and drinking water.

Electrical supplies witch over permit made for March 1st to 30th April period only in Meghri-2 220kVtransmission line under the responsibility of EPSO and HVEN according to the Contractor's request.

Necessary amount of road signs for other sections of road already prepared and collected in the mobile house area and will be installed before commencement of works as needed.

Traffic management

All construction works during reporting period and construction traffic was organized not to interfere with public traffic, not to block the public and pedestrian roads, as well as the entrance into properties, small businesses.

All construction works were commenced at 09.00 am and completed at 6.00pm.

Traffic of machinery was organized within RoW. New alternative/temporary roads for machinery and trucks traffic were not constructed during reporting period.

Driving and technical inspection licenses trucks/machinery were checked by Contractor's Environmental, Health and Safety specialist and Consultant EHS expert before they were hired.

During the reporting period public roads were not blocked and road traffic was not interrupted.

4.7 Training

Public hearings, awareness raising, information disclosure

N/A due to the Covid-19 Pandemic and State of Emergency in RA.

Staff trainings

Contractor organized and implemented environmental, H&S training for the engineering staff, foremen and workers who work on OPGW on 20 and 22 of July 2018. New workers were not hired for mentioned works.

COVID 19 infection risks the instruction on disease prevention methods were conducted for Contractor's staff before the actual construction works were conducted and during the site monitoring and inspection site visits.

Daily EHS toolbox meetings conducted by foreman in each active construction site for each type of work to be conducted during the workday.

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

During the reporting and for whole project implementation period the Contractor was able to implement fully the requirements set out in the IEE and SEMP. There was not any area where the contractor has not been able to implement EHS mitigation or monitoring measures.

COVID 19 infection risks instruction on issues of disease prevention methods were discussed and recommendations for changes to the Environmental Safeguarding process for the project was done. Action plan and prevention measures for Covid-19 must be set out in the SEMP.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

COVID 19 infection risks instruction on issues of disease prevention methods were conducted for Contractor's staff before the actual construction works were conducted and during the site monitoring and inspection site visits.

6.2 Opportunities for Improvement

N/A.

7 SUMMARY AND RECOMMENDATIONS

7.1 Summary

The following EHS activities based on IEE and SEMP documents were planned and implemented during the –January – June 2020 reporting period:

Daily supervision of environmental, health and safety activity during construction process by Construction Site managers.

Regular monitoring and inspection visits and reporting on environmental safeguards by Contractor's Environmental, Health and Safety Specialists.

Consultation to IA and Contractor staffs on COVID 19 infection risks and disease prevention methods.

Monthly reporting on EHS safeguards by Contractor.

During the reporting period Contractor's Environmental, Health and Safety team conducted monitoring and inspection visits to the Project construction sites to monitor implementation of all mitigation measures mentioned in the SEMP. During the monitoring visits no discrepancies were observed.

Instrumental monitoring was not carried out during reporting period, since the works causing noise, vibration and dust during reporting period were implemented far from existing roads and inhabitation places.

In the reporting period non-compliance notices were not received from the Consultant.

All construction works in the frame of the Project were implemented in accordance with IEE and SEMP requirements.

7.2 Recommendations

During the reporting period Consultant and Contractor had special remote meetings due to the Covid-19 Pandemic and State of Emergency In RA. COVID 19 infection risks instruction on issues of disease prevention methods were discussed and recommendations for changes to the Environmental Safeguarding process for the project was done. Contractor shall update the SEMP taking account COVID 19 Pandemic related risks.

8 ANNEXES

Annex 1: Example of Monthly EHS Monthly Report submitted by Contractor



EMR April 2020.pdf



EMR March
2020.pdf

Annex 3: Monthly distribution of activities in active working location for January-June 2020 period***Table 1: Type of construction works implemented during the March 2020***

| Type of works | Section | Status of works |
|----------------------------|--|--------------------------|
| Meghri-2 220kV OPGW | | |
| OPGW preparation | Section from 148 - 167 148-154, 154-158, 158-162, 162-167 | Finished |
| | 104-148 | To be continued in April |
| OPGW uprolling | Section from 148-154, 154-158, 158-162, 162-167 | Finished |
| | 106 - 148 | To be continued in April |
| OPGW fixing | Section from 148 - 167 | Finished |

Table 2: Type of construction works implemented during the April 2020

| Type of works | Section | Status of works |
|----------------------------|---------------------------------------|-----------------|
| Meghri-2 220kV OPGW | | |
| OPGW preparation | Section from 15-123, 124-131, 141-149 | Finished |
| OPGW uprolling | Section from 15-123, 124-131, 141-149 | Finished |

Annex 4: Monthly maximum and minimum numbers of workers worked and anticipated changes in staff on all active construction sites for January-June 2019 period

Table 1: Number of workers during the March 2020

| Construction site | Number of workers in March | | Anticipated changes in staff in April 2020 |
|---------------------|----------------------------|------------|---|
| | Minimum | Maximum | |
| Meghri-2 220kV OPGW | 8 persons | 12 persons | Changes in staff are not anticipated in April |

Table 2: Number of workers during the April 2020

| Construction site | Number of workers in April | | Anticipated changes in staff in May 2020 |
|---------------------|----------------------------|------------|---|
| | Minimum | Maximum | |
| Meghri-2 220kV OPGW | 9 persons | 12 persons | Changes in staff are not anticipated in May |

Annex 5. Back Up Dispatch Center Hand-Over Act



Avartakan_Act_BDC
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