

Environmental Monitoring Report

Bi-Annual Environmental Monitoring Report (Sindh Provincial Road Improvement Project - SPRIP)
(December 2019)

PAK: Sindh Provincial Road Improvement Project (SPRIP)

Prepared by Project Management Unit (PMU), Works and Services Department (WSD),
Government of Sindh (GOS) for the Asian Development Bank.

NOTES

- (i) The fiscal year (FY) of the Government of the Islamic Republic of Pakistan and its agencies ends on 30 June.
- (ii) In this report, "\$" refers to US dollars.

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Bi-annual Environmental Monitoring Report

Project Number: 46377-002-PAK

July to December 2019

Pakistan: Sindh Provincial Road Improvement Project (SPRIP)

Funded by the Asian Development Bank - ADB

Prepared by Environmental Specialist
Project Management Consultants (PMC)
Hyderabad, Pakistan

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ABBREVIATIONS

| | |
|------|--|
| ADB | Asian Development Bank |
| AIDS | Acquired Immune Deficiency Syndrome |
| COC | Conditions of Contract |
| CAA | Corrective Actions Applied |
| CAP | Corrective Action Plan |
| DB | Decibel |
| DTL | Deputy Team Leader |
| EMMP | Environmental Management & Monitoring Plan |
| EMP | Environmental Management Plan |
| EPA | Environmental Protection Agency |
| ES | Environment Specialist |
| ESU | Environmental and Social Unit |
| GoP | Government of the Pakistan |
| GOS | Government of Sindh |
| GRC | Grievance Redressal Committee |
| HIV | Human Immunodeficiency Virus |
| HSE | Health Safety and Environment |
| IA | Implementation Agency |
| IEE | Initial Environmental Examination |
| LPG | Liquefied Petroleum Gas |
| MCC | Metallurgical Corporation of China Ltd |
| NEQS | National Environmental Quality Standards |
| OHS | Occupational Health & Safety |
| OVI | Objectively Verifiable Indicators |
| PAM | Project Administration Manual |
| PD | Project Director |
| PEAS | Professional Engineering Associates |
| PMC | Project Management Consultants |
| PMU | Project Management Unit |
| PPEs | Personal Protective Equipment |

| | |
|-------|---|
| RAMS | Restoration & up grading the established Road Asset Management System |
| RE | Resident Engineer |
| REA | Rapid Environmental Assessment |
| RoW | Right of Way |
| SC | Supervision Consultant |
| SP | Sindh Province |
| SPS | Safeguard Policy Statement |
| SEQS | Sindh Environmental Quality Standards |
| SSEMP | Site Specific Environmental Management Plan |
| STI | Sexually Transmitted Infections |
| TA | Technical Assistance |
| TL | Team Leader |
| UJC | Umer Jan and Co. |
| UMA | Umar Munshi Associates |
| WSD | Works and Services Department |
| YEC | Yooshin Engineering Corporation |

1. INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for Sindh Provincial Road Improvement Project (SPRIP).
2. This report is the 6th EMR for the project and represents the project activities related to environmental monitoring for the period from July – December 2019. This report fulfills the requirements to monitor the effectiveness of ADB safeguards policy, its implementation, and process as well as to ensure sound environmental planning. Potential environmental impacts are identified including indirect and cumulative impacts, and their significance assessed. The report also includes recommendations for the future course of action.

1.2 Headline Information

3. The contractors on all the packages (Package 01 to 07) carried out the tasks and actions described in their EMP successfully. A few of the issues related to PPEs, housekeeping, bifurcation and signage were identified on package 04, 05, 06 & 07 (LOT 1, 2 & 3) for which mutually agreed Corrective Action Plan (CAP) was practiced by the contractor. The corrective action plans along with Compliance Status Reports (CSR) are attached as **Annexure I** of this document.
4. No monitoring in this reporting period was done at Package 01 to 06 but due to lack of construction activity while pre – construction and quarterly environmental monitoring have been done at Package 07. Moreover, Package 02, 04, 05 & 06 have not submitted relevant Site Restoration Plans in this reporting period for which the non-conformance notices and reminders were issued respectively.
5. The external training has been conducted successfully at Package 07 (LOT 1, 2 & 3) at the end of November 2019.
6. SSEMP of extension roads for Package 04 (1.2 Km & 5.2 Km) and Package 05 (3.2 Km) also prepared and submitted. The extension of Package 04 & 05 will be executed on the special request of Deputy Commissioner.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

7. Government of Sindh with the assistance of Asian Development Bank prepared the project for improvement of 328 Km (Package 01 to 06) and 80 Km of Package 07 (LOT 1, 2 & 3) of inter-district main roads connecting with National / Main Highways, under the Project named as Sindh Provincial Road Improvement Project (SPRIP).
8. ADB assigned the Feasibility Study to consultants M/s Engineering Consultants International (Pvt) Ltd; Karachi, under TA-8406-PAK. The T.A. Consultants finalized the feasibility study and shortlisted nine roads (initially six roads from package 01 to 06 and then later three more roads from Package 07) with a cumulative length of 408 Km (328 km +80 Km) with a uniform width of 7.3m. In addition to the Investment component, the project will also include some consultancy services and equipment for reform component such as:
 - i. Project Management Consultant,
 - ii. Restoration and upgrading the established Road Asset Management system (RAMS),
 - iii. Preparation of the Sindh Road Network Master Plan, and
 - iv. Institutional strengthening and training for Works and services Department WSD and provision of emergency response equipment for traffic police Department of Government of Sindh. Loan agreement of Loan No.3305-PAK signed on 30th August 2016.
9. The project is being administered by the Project Management Unit (PMU), Works and Services Department (WSD) Government of Sindh (GOS), which is represented by the Project Director, PMU has hired the Project Management Consultant (PMC), for design review and construction supervision of the civil works.
10. PMU after the required process with the consultation of ADB hired the Project Management Consultant consist of Engineering Consultants Firms i.e. Yooshin Engineering Corporation (Korea) in associates with Umar Munshi Associates (UMA) and Professional Engineering Associates (PEAS) for “Design Review” and “Project Management & Construction Supervision Consultant”. The Consultancy Agreement between Project Management Consultants (PMC) and Project Management Unit (PMU) of Works and Services Department, Government of Sindh was made on 14th November 2016.
11. The roads (408 Km) in SPRIP are 3.65m, 5.5m and 7.3m wide traversing in 12 districts of Sindh i.e. Kashmore/Kandhkot, Sukkur, Dadu, Jacobabad, Shikarpur, Larkana, Tandu Allaha Yar, Tando Muhammad Khan, Badin, Mirpurkhas, Sanghar, and Matiari. The roads with width of 3.65m and 5.5m will be widened to 7.3m. The location map of packages has been given below.

12. The Project roads have been divided into 6 road packages as table follows:

Table 1: Road Packages

| Sr. No. | Description | No. of Package | Total Length (km) |
|---------|------------------------------|----------------|-------------------|
| 1 | Thull to Kandhkot Road | ICB-SPRIP-01 | 44.00 |
| 2 | Sheranpur to Ratodero Road | ICB-SPRIP-02 | 36.00 |
| 3 | Khyber to Sanghar Road | ICB-SPRIP-03 | 64.00 |
| 4 | Sanghar to Mirpur Khas road | ICB-SPRIP-04 | 63.00 |
| 5 | Tando Mohammad Khan to Badin | ICB-SPRIP-05 | 67.00 |
| 6 | Digri to Naukot Road | ICB-SPRIP-06 | 54.00 |

13. Under the same ADB loan, the Government of Sindh (GOS) has proposed the rehabilitation/improvement of an additional 3 roads of 80 Km in package - 07. The three roads in an additional package are given as under:-

1. LOT – 1: Tando Allahyar to Chambar Road Section – District Tando Allahyar
2. LOT – 2: Sehwan to Dadu Road Section – District Dadu
3. LOT – 3: Jahan Khan to Faizu Laro via Chak-Rustam Road Section – District Shikarpur

Table 2: Additional Road Package 07

| S/No. | Description | Total Length (km) |
|-------|---|-------------------|
| 1 | Tando Allahyar to Chambar Road Section | 19.00 |
| 2 | Sehwan to Dadu Road Section | 32.00 |
| 3 | Jahan Khan to Faizu Laro via Chak – Rustam Road Section | 29.10 |

2.2 Project Contracts and Management

14. The Works and Services (W&S) Department Govt. of Sindh was the implementation agency (IA) for roads and bridges rehabilitation component of SPRIP.

15. The Project Management Consultants (PMC) is responsible to ensure the implementation of the environmental management and monitoring requirements and procedures for SPRIP under the overall guidance of Initial Environmental Examination (IEE). The PMC's primary role is to provide services for design review and construction supervision of roads in Sindh province to be rehabilitation including Bridges & Culverts under SPRIP. PMC is responsible to serve as the "Engineer" within the context of the Conditions of Contract (COC) and is required to nominate Resident Engineer and other staff for the contract that is a full-time resident in the area or located in the proximity of project area.

16. Works & Services Department has established Environmental and Social Unit (ESU). The ESU was responsible for environmental and social review based on the selection criteria, preparation, submission, implementation and environmental management &

monitoring and evaluation of the sub-projects. ADB has provided Environmental specialist in order to have technical support to ESU.

17. Project Management Consultants (PMC) has been engaged by IA in order to strengthen their procurement capacity, support and help monitor design and construction supervision services and support the preparation, implementation, monitoring and compliance of environmental safeguard action plans including consultation and social and gender analysis.
18. The Project Management Consultants (PMC) have established an office at Hyderabad and sub-offices at Mirpur Khas and Sukkur. Packages 01, 02 & Package 07 (LOT 2 & 3) construction sites are under Residence Engineer Sukkur – II Sukkur, while Packages 03, 04, 05, 06 and Package 07's LOT 01 is under Residence Engineer – III Tando Allaha Yar.
19. At all the construction sites (except Package 07), the contractors bare mobilized since January 2017. The Contractors for Package 07 (LOT 1, 2 & 3) has been mobilized since the end of July 2019. The Contractors at each site have hired Environmentalists, who worked with the help of Contractors' support staff (Site Engineers, Inspectors, etc.).

Table 3: Project Environmental Key Personnel

| S/No | Name | Designation | Package | Telephone No |
|------|------------------------|-------------------------------|------------------------|--------------|
| 1 | Aziz ul Haque Siddiqui | Deputy Director-PMU | 01 to 07 (LOT 1,2 & 3) | 0333 2706007 |
| 2 | Sameen Khokhar | Environment Specialist- PMC | 01 to 07 (LOT 1,2 & 3) | 0301 4750500 |
| 3 | Ashfaq Ahmad | Assistant Engineer – PMU | 03, 05 & 07 (LOT 01) | 0333 2656030 |
| 4 | Amjad Qureshi | Assistant Engineer – PMU | 04, 05 & 07 (LOT 02) | 0334 2120881 |
| 5 | Shehbaz Shah | Assistant Engineer-PMU | 01, 02 & 07 (LOT 03) | 0333 2762110 |
| 6 | Najeeb Soomro | Environmentalist – Contractor | Package 07 (LOT 1 & 3) | 0334 8961884 |
| 7 | Ahsun Amur | Environmentalist – Contractor | Package 07 (LOT 2) | 0304 2678363 |

20. The all seven road packages have been awarded to the following contractors.

Table 4: Contractor Packages Detail

| Sr. No. | Package Number | Name of Section | Contractor |
|---------|--------------------------|------------------------------------|---|
| 1 | Package No. ICB-SPRIP-01 | Thull to Kandhkot Road – 44 km | M/S Metallurgical Corporation of China Ltd. M/S Umer Jan & Co (UJC) [JV] |
| 2 | Package No. ICB-SPRIP-02 | Sheranpur to Ratodero road – 36 km | M/S Xi'an Industrial Development Co. Ltd of China Road and Bridge Corporation M/S |

| Sr. No. | Package Number | Name of Section | Contractor |
|---------|--------------------------|--|---|
| | | | Sardar M Ashraf D. Baloch (Pvt) Ltd. [JV] |
| 3 | Package No. ICB-SPRIP-03 | Khyber to Sanghar road – 64 km | M/S Xinjiang Beixin Road & Bridge Group Co. Ltd |
| 4 | Package No. ICB-SPRIP-04 | Sanghar to Mirpur Khas road – 63 km | M/S Xinjiang Beixin Road & Bridge Group Co. Ltd |
| 5 | Package No. ICB-SPRIP-05 | Tando Mohammad Khan to Badin road – 67 km | M/S Xi'an Industrial Development Co. Ltd of China Road and Bridge Corporation – M/S Sardar M Ashraf D. Baloch (Pvt) Ltd. [JV] |
| 6 | Package No. ICB-SPRIP-06 | Digri to Naukot – 54 km | M/S Xinjiang Beixin Road & Bridge Group Co.Ltd |
| 7 | Package No. ICB-SPRIP-07 | LOT – 1: Tando Allahyar to Chambar Road – 19 Km | M/S Umer Jan & Co Noor ul Haq & Brothers Construction Company – NBC (JV) |
| | | LOT – 2: Sehwan to Dadu Road – 32 Km | M/S Jiangsu Haitong construction Engineering Co. Ltd M/S Nauman Construction Company M/S Shah Builders (JV) |
| | | LOT – 3: Jahan Khan to Faizu Laro Via Chak-Rustam Road – 29 Km | M/S Umer Jan & Co. |

2.3 Project Activities during Current Reporting Period

Table 5: Project Activities during Current Reporting Period

| Name of Package | Main Construction Activities | Active Work Site Chainage | Number of Workers Involved |
|---|------------------------------|---------------------------|----------------------------|
| ICB-SPRIP-01: Thull to Kandhkot Section (44.0Km) | Complete | | |
| ICB-SPRIP-02: Sheranpur to Ratodero Section (36.0Km) | Bridge | 39+561 | 10 |
| | Stone Pitching | 53+200 | 05 |
| ICB-SPRIP-03: Khyber to Sanghar Section (64.0Km) | Complete | | |
| ICB-SPRIP-04: Sanghar to Mirpurkhas Section (63.0Km) | Drain Work | Km. 33+600 to 33+700 | 08 |
| ICB-SPRIP-05: Tando Mohammad Khan to Badin Section (67.0Km) | Complete | | |
| ICB-SPRIP-06: Digri to Naukot Section (54.0Km) | Guard Rail | Km. 15+600 to 16+400 | 08 |
| | Guard Rail | Km. 18+300 to 19+400 | 07 |

| Name of Package | | Main Construction Activities | Active Work Site Chainage | Number of Workers Involved |
|--|--|--------------------------------|--------------------------------------|----------------------------|
| Additional Road: Dual Extension of 1.2 KM from Start Point & 5.6 KM from End Point of Package 04 | | SSEMP have been submitted | | |
| Additional road of 1.2 Km (Dual) Allaha Wala Chowk to DC Chowk & 2.0 Km from DC Chowk to Sujawal Bypass Road (Total 3.2) of Package 05 | | SSEMP have been submitted | | |
| Package No. ICB-SPRIP-07 | LOT – 1: Tando Allahyar to Chambar Road – 19 Km | Aggregate Base Course | 0+000 to 18+110 | 20 |
| | LOT – 2: Sehwan to Dadu Road – 32 Km | Ready for Asphalt (prime Coat) | 0+000 to 6+000 | 20 |
| | | Subbase shoulder | 6+001 to 10+ 000 | 15 |
| | | Earth Work | 10+001 to 11+700 & 13+001 to 14+700 | 10 & 06 |
| | | Subbase | 11+701 to 13+800 | 07 |
| | | Aggregate base course | 14+701 to 16+800 & 17+300 to 25+00 | 20 |
| | LOT – 3: Jahan Khan to Faizu Laro Via Chak-Rustam Road – 29 Km | Bridge | 7+883 | 10 |
| | | Lean Concrete on culvert | 2+230, 2+134, 0+360 R/S | 18 |
| | | Backfilling on culvert | 1+00, 0+843 | 04 |
| | | Concrete Pouring on culvert | 2+311, 6+942 | 12 |
| | | Backfilling on culvert | 8+324, 9+624, 10+624, 10+124, 10+338 | 10 |

21. The progress up to the reporting period i.e. July – December 2019 of the Rehabilitation Projects SPRIP envisages 408 KMs Roads including culverts and bridges. Total progress achieved (%) of each project is given below while mapping along with the location of asphalt plant and contractor's camp have been given in Figures – 2, 3 & 4.

| | |
|------------|----------|
| Package 01 | 100.00 % |
| Package 02 | 96.00 % |
| Package 03 | 100.00 % |
| Package 04 | 99.00 % |
| Package 05 | 100.00 % |

| | |
|------------|---------|
| Package 06 | 97.00 % |
| Package 07 | |
| LOT 01 | 29.13% |
| LOT 02 | 15.96% |
| LOT 03 | 18.02% |

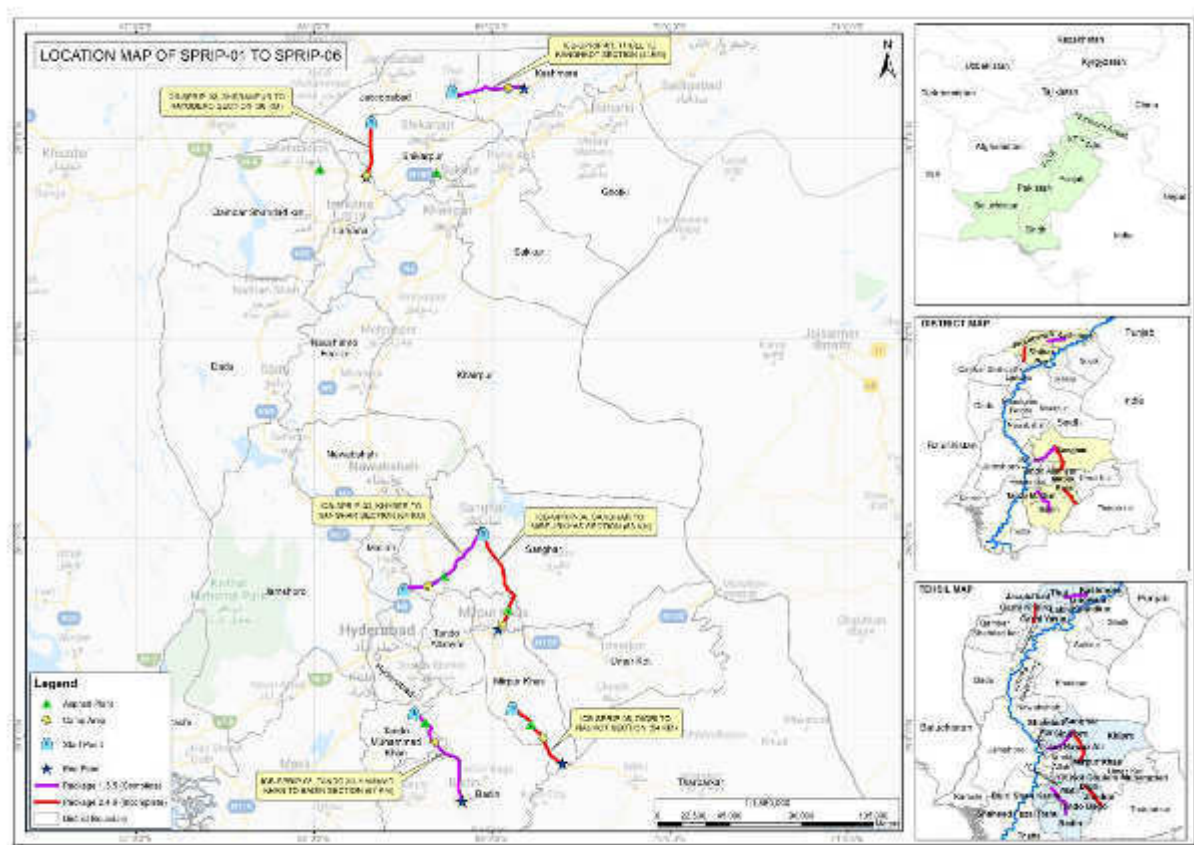


Figure 2 Location Map and Status of Package 01 - 06

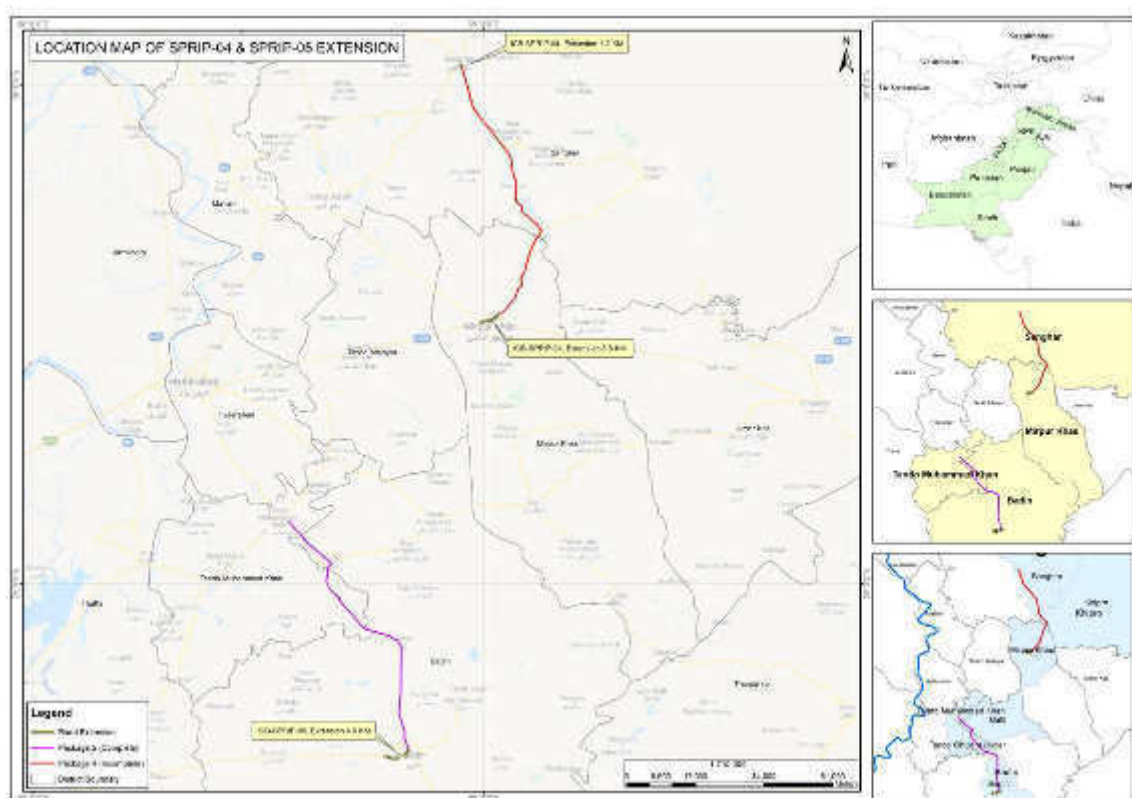


Figure 3 Location Map of Package 04 & 05, Extension

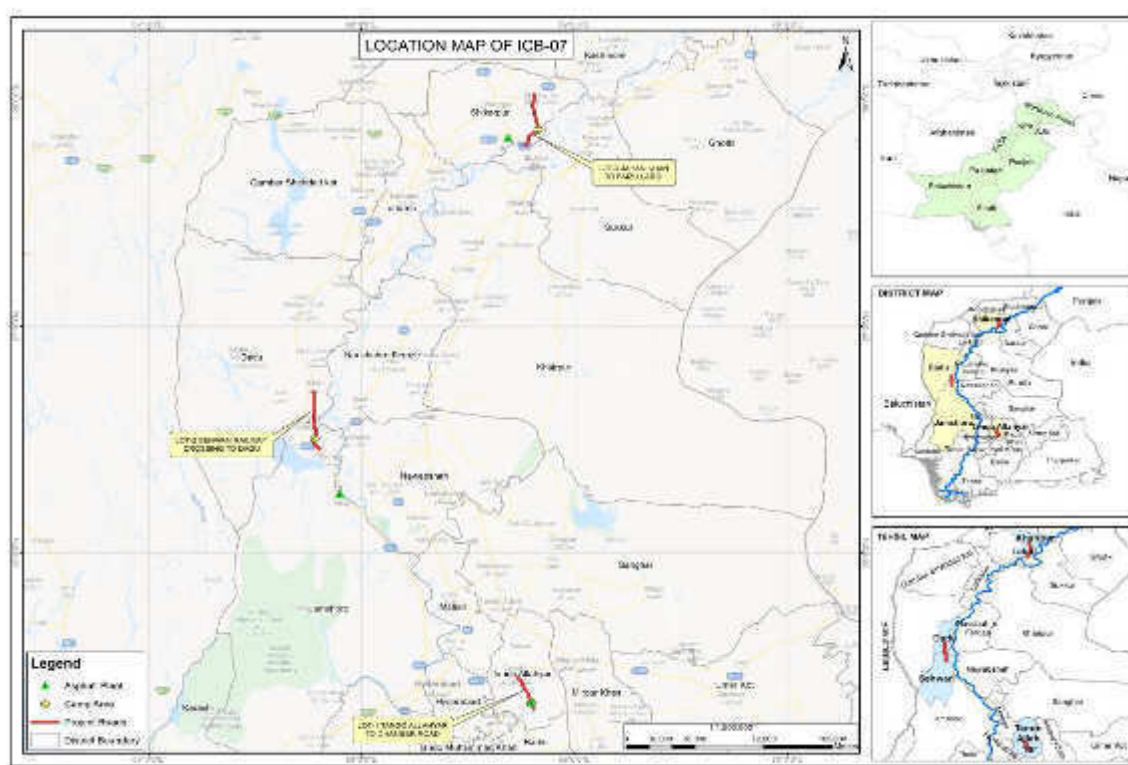


Figure 4 Location Map of Package 07 (LOT 1, 2 & 3)

2.4 Description of Any Changes to Project Design

22. At package 4 (Sanghar to Mirpurkhas ICB-04) there is an existing bridge at RD 44+200. This bridge is about 64.4 meters long with a width of 7.30 m. Initially, the plan of this bridge was only to rehabilitate with necessary maintenance but after detailed technical investigation of the existing bridge by review and supervision consultants. It was decided to construct a new bridge adjacent to existing bridge. The decision was made after detail investigating the condition of the existing bridge. The new bridge is located at RD 44+200 and is 59.6 m long and has a carriageway of 7.3 meters.
23. Except Package 4, all the projects have been commenced/constructed on the same design and route which is given in IEEs.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

24. Environmental Specialist – PMC has carried out monthly environmental compliance monitoring of the project to ensure the environmental mitigation measures or conditions are adequately addressed.
25. The Deputy Director - PMU also did the few surprise visit of the sites during this reporting period and any non-conformance noted were immediately pass to the contractor and PMC – Environmental Specialist.
26. Environmental Specialist - PMC have also guided the contractor and its environmental specialist on compliance of the non-conformances identified during the reporting period
27. The contractor environmental specialists have conducted the regular field inspections and compliance was checked through Environment Checklist which was then shared with the contractor and Environmental Specialist (PMC). The staff training, toolbox talks and environmental testing through 3rd party environmental laboratory was also performed on site.
28. The contractor environmental specialists submit the environmental progress of the site though monthly environmental compliance reports to the environmental specialist of PMC.

3.2 Site Audits

29. The contractor environmental specialists have conducted regular field inspections with the internal audits. The results of the internal audit have been shared with the contractor staff itself and to the PMC-Environmental Specialist.
30. The PMC-Environmental Specialist also undertaken the monthly site audits of all the packages. The detail of site audits and its significant findings is given in the table below-

Table 6: Site Audits with Significant Findings

| Site Audit Date | Packages | Significant Findings |
|--|--|---|
| 4 th Week of July 2019 | 01, 02, 03, 04, 05, 06 & 07 (LOT 1, 2 & 3) | There is the weak implementation of PPEs identified on package 02, 04 and 06 At Package 07, contractor mobilizing and allied facilities (Camp area, etc.) under progress |
| 2 nd Week of September 2019 | 07 (LOT 1, 2 & 3) | Provide recommendations to the contractor regarding the establishment of allied facilities on the basis of pre-construction environmental monitoring as suggested during a meeting with ADB mission at PMU-Hyderabad (16 Sep 2019). |
| 2 nd Week of | 01, 02, 03, 04, | Few of the issues related to PPEs and signage has been |

| Site Audit Date | Packages | Significant Findings |
|---------------------------------------|------------------------------|--|
| October 2019 | 05, 06 and 07 (LOT 1, 2 & 3) | identified on package 04, 06 & 07 (LOT 1, & 3) |
| 2 nd Week of November 2019 | 07 (LOT 1, 2 & 3) | Few of the issues related to PPEs, TBT, borrow area management, solid waste management, emergency number display and signage has been identified on package 07 – LOT 1, 2 & 3. |
| 3 rd Week of December 2019 | 07 (LOT 1, 2 & 3) | Few of the issues related to PPEs, borrow area management, and signage has been identified on package 07 – LOT 3. |

31. Few of the common issues were identified during the current and previous reporting period summarizes as under:-

- a) Package 01 – 06 have been completed (01, 03 & 05) or near completion (package 02, 04 & 06), therefore the contractors of the relevant package, directed to submit the site restoration plan at the earliest 'as per class 4.18 Protection of Environment para 3, 4 & 7 of section 8 particular conditions of contract' because without this, project will not be considered complete and handover to the client.
- b) The Contractors have provided the PPEs to the workforce but weak implementation is found mostly on package 04, 06 and 07 (mostly LOT 3)
- c) The contractor was instructed to train/motivate the workforce for the use of PPEs and responsibility should be given to the site in charge for proper implementation in wearing.
- d) The signage and bifurcation issue was also common on package 07 (LOT 1 & 2) during reporting period for which the non-conformance notices were issued.

3.3 Issues Tracking (Based on Non-Conformance Notices)

32. The issues found during this reporting period is given as under:-

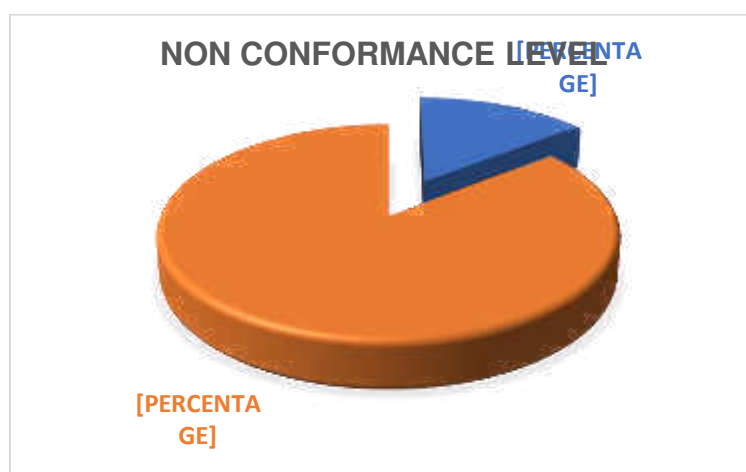
- Package 01 & 03 have submitted and finalized the site restoration plan while reminders have been issued to the Package 02, 04, 05 & 06.
- The issue of the housekeeping and PPEs were found on LOT 1 of package 07 for which the non-conformance notice was issued.
- The issue of signage and bifurcation were also found on LOT 2 for which the non-conformance notice was issued. After the issuance of Non-Conformance notice, the signage and bifurcation were improved and issues resolved.

33. The summary of the issues is given as under:-

Table 7: Summary of Issues Tracking Activity for Current Period

| Package Name | | Total number of issues for the project | Number of open issues | Number of Closed Issues | Percentage closed | Issues Open this reporting period | Closed this reporting |
|---|--|---|-----------------------|-------------------------|-------------------|-----------------------------------|-----------------------|
| ICB-SPRIP-01: Thull to Kandhkot Section (44.0Km) | | Concluded | | | | | |
| ICB-SPRIP-02: Sheranpur to Ratodero Section (36.0Km) | | 4 | 1 | 3 | 75 | 1 | 3 |
| ICB-SPRIP-03: Khyber to Sanghar Section (64.0Km) | | Concluded | | | | | |
| ICB-SPRIP-04: Sanghar to Mirpurkhas Section (63.0Km) | | 4 | 1 | 3 | 75 | 1 | 3 |
| ICB-SPRIP-05: Tando Mohammad Khan to Badin Section (67.0Km) | | Completed but not concluded as Restoration Plan have not been submitted | | | | | |
| ICB-SPRIP-06: Digri to Naukot Section (54.0Km) | | 4 | 1 | 3 | 75 | 1 | 3 |
| ICB-SPRIP-07: | LOT -1, Tando Allahyar to Chambar Road | 5 | 1 | 4 | 83 | 5 | 4 |
| | LOT – 2: Sehwan to Dadu Road | 5 | 1 | 4 | 83 | 5 | 4 |
| | LOT – 3: Jahan Khan to Faizu Laro Via Chak-Rustam Road | 7 | 2 | 5 | 71 | 2 | 5 |

Figure 5: Summary of Issues by Non-Conformance



3.4 Trends

34. The information from previous period reports and the current period information are used to identify trends in conformance and issues. The overall conformance status of the project improved where the conformance level is neither positive nor negative.
35. The letter issued on the non-conformances is attached as **Annexure II** of this report.

3.5 Unanticipated Environmental Impacts or Risks

36. No unanticipated environmental impacts and risks have been identified during the current period. Details of all the impacts which have been aggravated during the reporting period and their mitigation measures are discussed in the project's IEE.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

37. Internal environmental monitoring consists of two types. The first type consists of visual inspections of things such as soil erosion, restoration of vegetation, solid waste disposal and so on. The second type requires field sampling and lab analysis for example water quality, air quality and noise levels. The field sampling and lab analysis have been conducted, including air and noise and water quality during the reporting period. Field inspections have been undertaken by the on-site environmental and Health Safety team of Project Management Consultant including ARE and one Inspector headed by Resident Engineer and Environmental Specialist on a regular basis. As far as contractors are concerned overall 4 member's team at each subproject implement and monitor the Environmental, Health and Safety that includes the Project Manager, Construction Manager, Site Engineer and Site HSE Engineer.
38. The environmental monitoring was carried out by using, daily, weekly and monthly EMP compliance (checklists) as well as through visual observations to get information on the actual nature and extent of key impacts and the effectiveness of mitigation and enhancement measures outlined in the Site Specific Environmental Management Plans (SSEMP) and agreed by the Contractors under the contracts. The SSEMP covered all the aspects mentioned in the project specific EMPs for each project. The monitoring of noise and vibration, surface and groundwater, air quality, flora and fauna, campsites, topsoil erosion, cultural heritage and safety provisions are discussed in this section. All the subprojects are category B projects and environmental approval from ADB was obtained.
39. A monthly monitoring checklist was prepared to assess the environmental impacts of the projects on the surrounding environment. On careful review of this form, inconsistencies and duplication of questions were corrected such that any "yes" answer indicates compliance and any "no" indicates no compliance. The "NA" or not applicable answers were also tallied; however, no reasons for non-applicability were included, thus making these results less useful. To date, the contractors have prepared checklists till December 2019 which have been checked by the site Environment Specialist and submitted to the PMC. The analysis showed that non-compliance was most often in the areas of, health and safety and contractor's good housekeeping. The possible instruction related to non-compliance has been given to the contractors by the Environmental Specialist of PMC which the contractor rectified within a given time frame. The sample daily & monthly monitoring checklist has been attached as **Annexure III** of this report.

4.1.1 Air Quality

40. The major sources of air emissions are running vehicles on the road as well as construction equipment and construction vehicles. As the packages, 01 to 06 are in

the finishing stage and no major construction vehicles were on the site and only allied works such as guard rail and signage are in progress. Therefore, air quality monitoring has not been performed in those packages during the reporting period.

41. However, Baseline/pre-construction and quarterly air monitoring have been done at Package 07 (LOT 1, 2 & 3). Baseline/pre- construction monitoring was held in the mid of August 2019 before the start of construction work and quarterly monitoring was conducted at the end of December 2019 when about 20% of the work has been completed.
42. We have compared both data values and no considerable difference can be seen which indicates that there is environmental compliance in the work done so far. And all the values meet the SEQS. In the graph shown below, indicated the same thing for the LOT 1, 2 & 3 referring to the start point, camp area and endpoint of the road. The result has been annexed as **Annexure IV**.

Figure 6: Comparison of Ambient Air Monitoring of Package 07, LOT 1



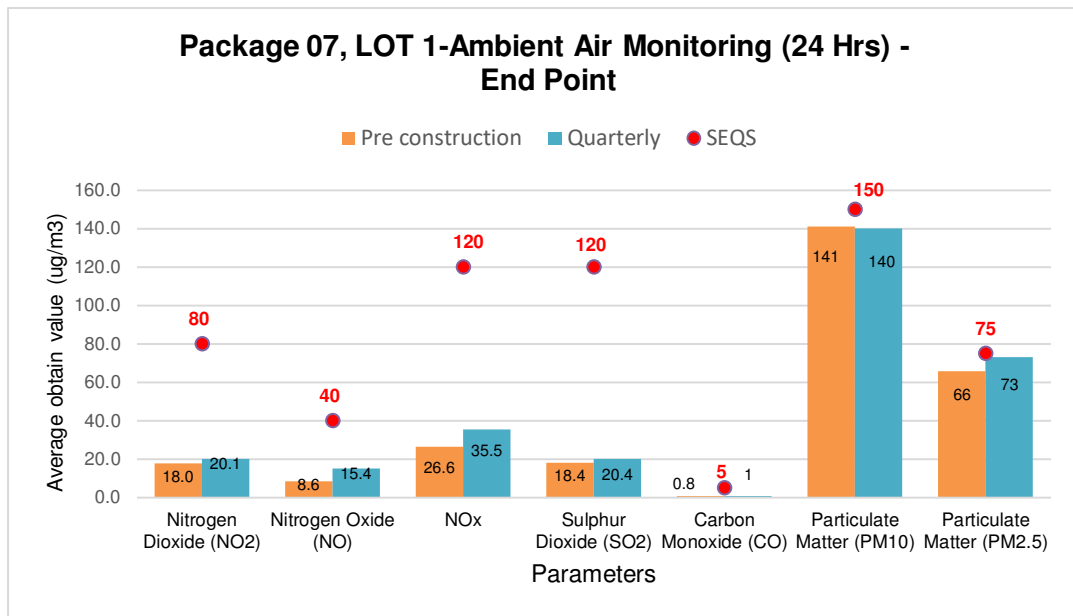
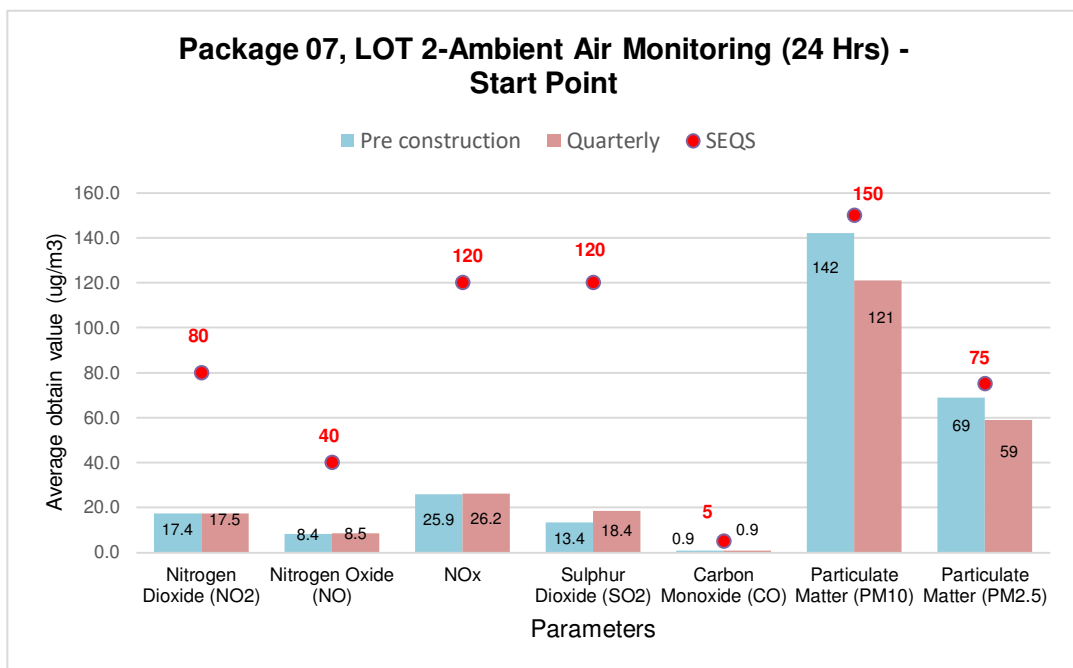


Figure 7: Comparison of Ambient Air Monitoring of Package 07, LOT 2



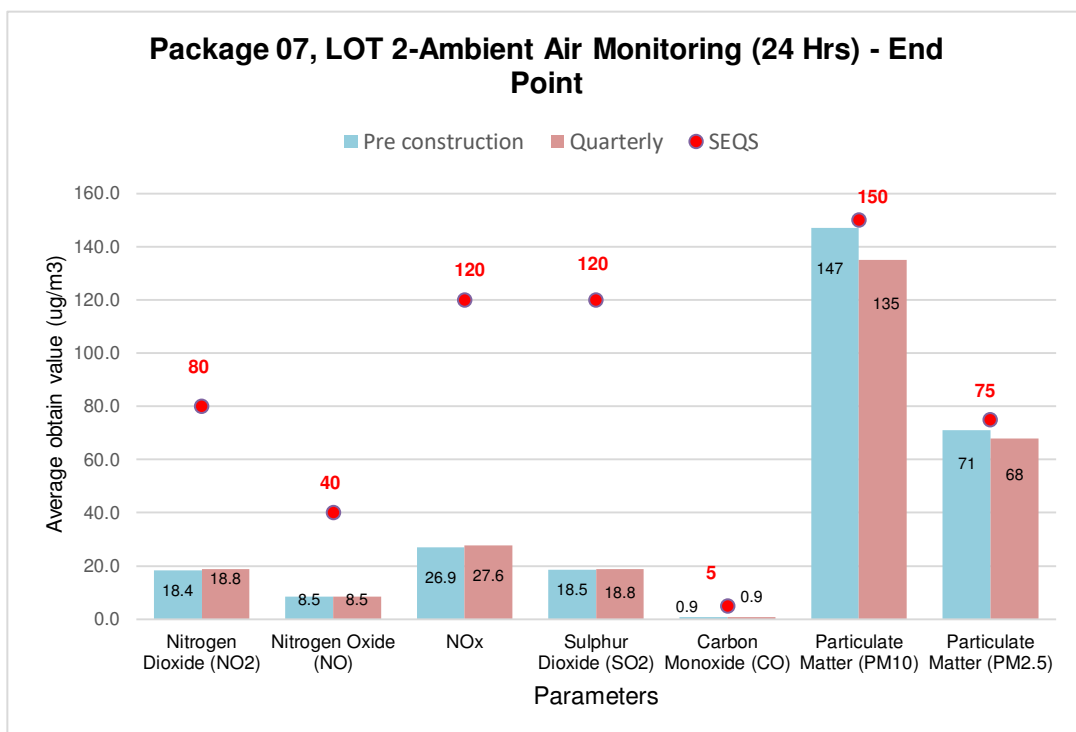
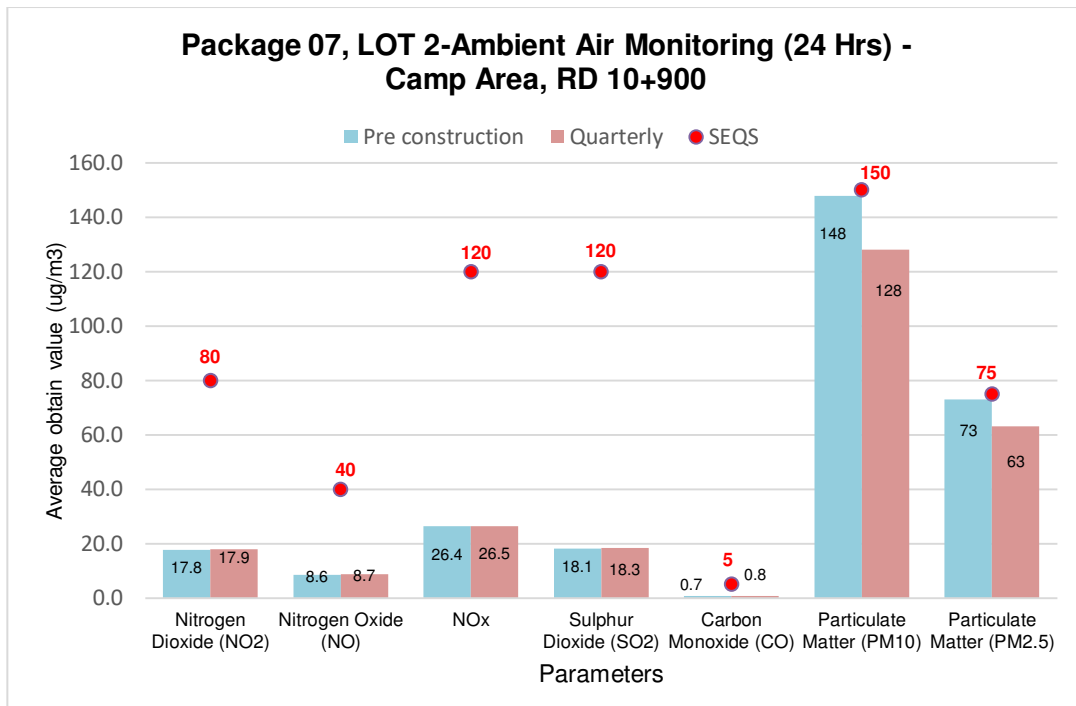
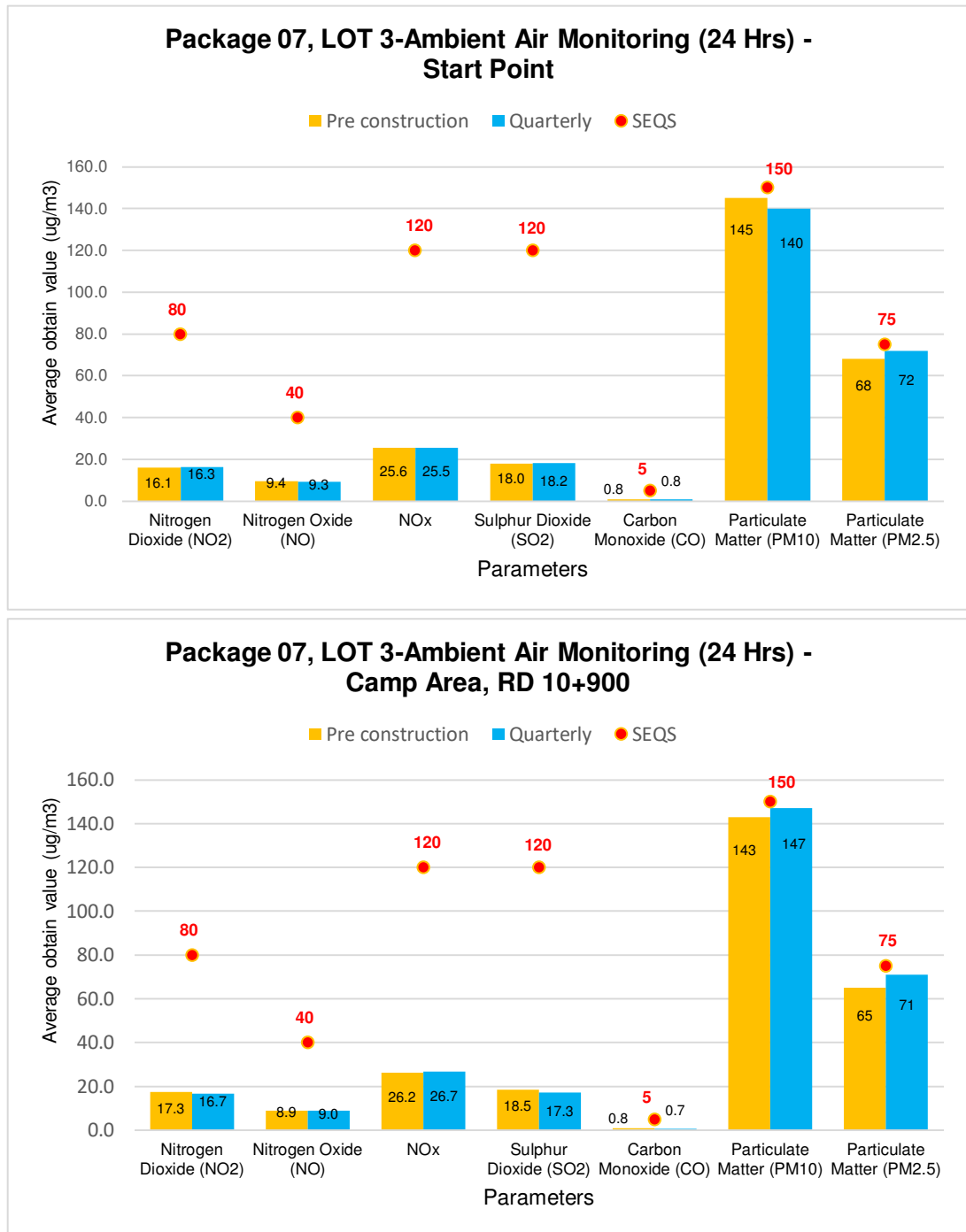
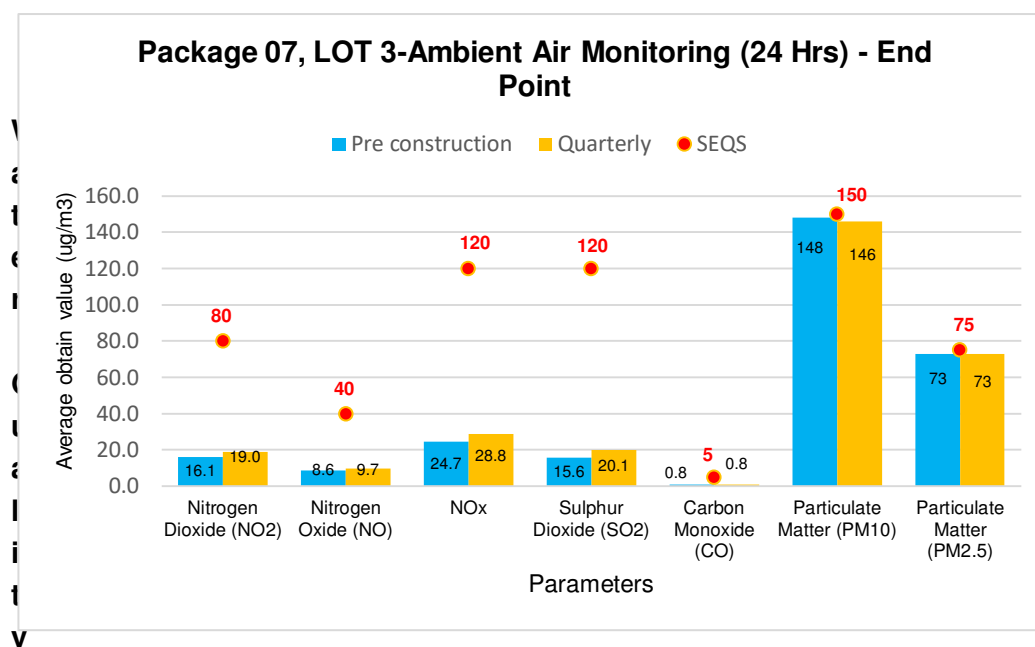


Figure 8: Comparison of Ambient Air Monitoring of Package 07, LOT 3



4.1.2



43. The monitoring of water resources has not been performed during this reporting period at Package 07 to assess the damage caused by the construction activities. The implementation of the preventive and corrective measures which were mentioned in SSEMP was monitored and assessed in the field visits and environmental audits.
44. Camp areas were selected where adequate natural drainage was available. No surface water or groundwater contamination was reported due to oil spillages, solid waste dumping or aggregate lying during the reporting period. The compliance to the SSEMP was ensured. Monitoring of potable water for drinking purpose was being carried out.
45. Baseline monitoring has been done which is satisfactory in all the parameters however the microbial contamination has been traced in all three LOTs of package 07.
46. In order to overcome this issue LOT 1 and LOT 2 have fetched water from the nearby filtration plant furthermore, the water sample were collected and no contamination was seen in the quarterly monitoring reports however, the same thing was devised to LOT 3 which they still fail to imply. Regarding this concern, PMC has issued the number of letters to the contractor for (reference Annexure I). The result has been annexed as **Annexure IV**.
47. The wastewater from the labour camps has been disposed of properly through the septic tank. All the labour camps have provision of the septic tanks.

4.1.3 Noise and Vibration

48. The contractors have taken measures to reduce noise levels and selected all the equipment that generates low levels of noise, however, all the construction

machinery should be properly maintained in order to have noise levels within SEQS. Noise reduction devices or methods (e.g. hoarding) may be applied where piling equipment is operating within 500 m of sensitive sites such as schools or other receptors identified in SSEMPs of all sites. Concrete-mixing plants and similar activities are located at least 300 m away from sensitive areas such as residences, schools and hospitals. The noise quantity at the construction site was also measured at all the LOTs of package 07, which are within the permissible limits. In the quarterly monitoring, the values were quite controlled with respect to the baseline monitoring but still, the values are near the SEQS as depicted in the following figures. The result has been annexed as **Annexure IV**.

Figure 9: Noise Level Monitoring at LOT 1

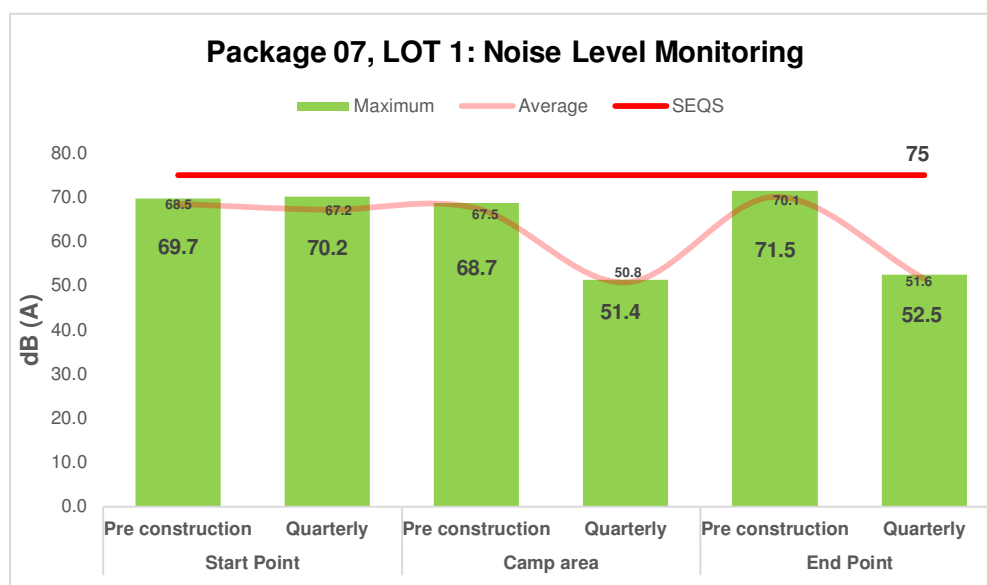


Figure 10: Noise Level Monitoring at LOT 2

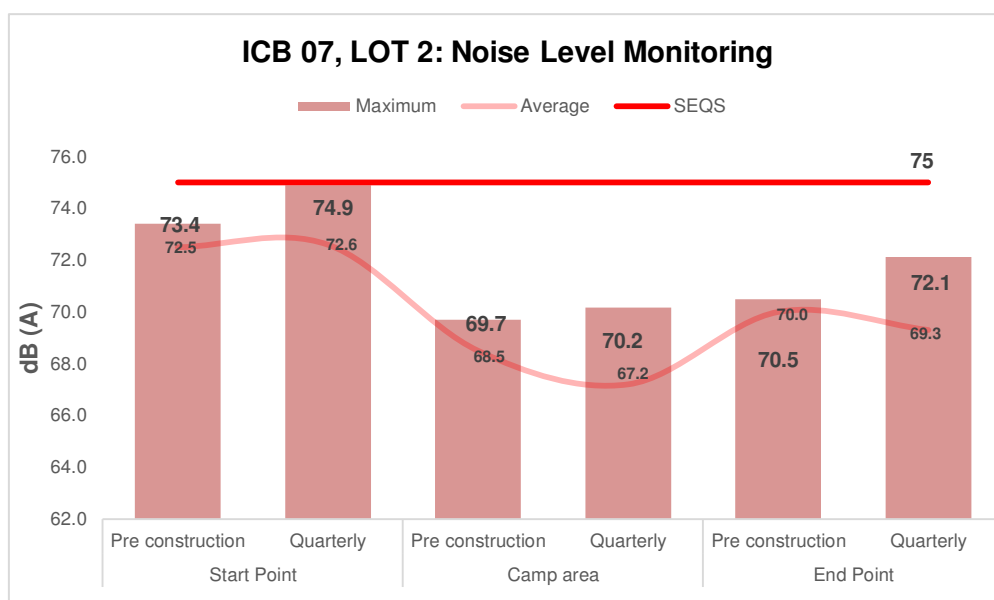
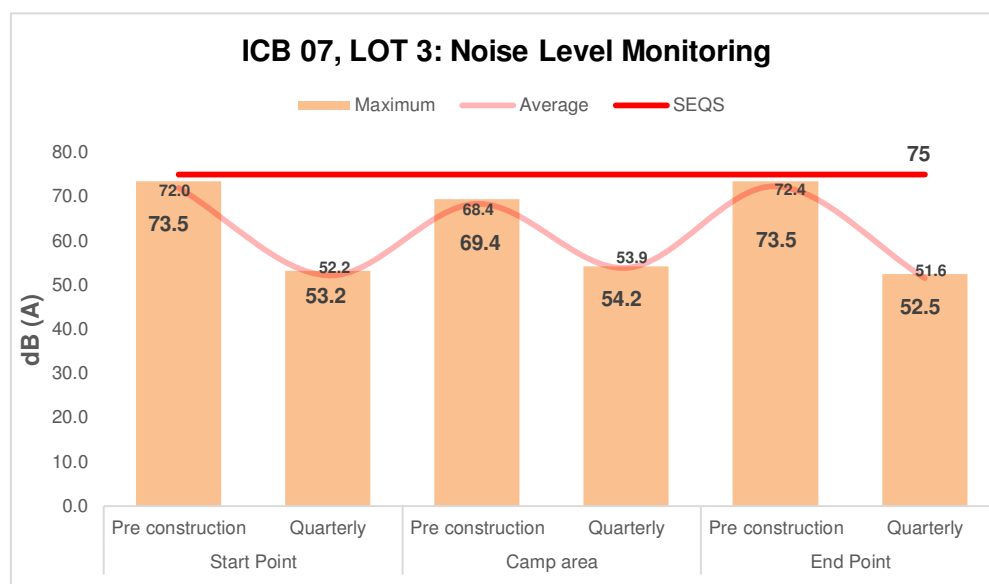


Figure 11: Noise Level Monitoring at LOT 3



49. Implementation of the mitigation measures recommended in SSEMP to reduce the impact of Noise and Vibration were observed. Construction activities situated close to populated areas were limited to daylight hours only to minimize the impact of noise. prayer timings and school timings were observed especially in the areas close to the mosques and schools along the carriageway during the construction activities. Contractors were advised to keep their earth moving equipment in good condition and to provide personal protective equipment like ear-plugs to the working staff at noise generating sites. No noise and vibration-related complaints from the public or workers were registered during the reporting period. As these projects are category B projects, in addition to the above measures, compliance with the SSEMP. Special field visits were carried out in order to assess the effectiveness of the protective equipment used by the contractors for the workers. The safety signs and signage were arranged by the contractors in order to warn people about the high intensity or level of noise being generated by the machinery.

4.2 Trends

50. During the last reporting period, the concentration of PM at package 07 found near but within the SEQs limit. This was due to the insufficient sprinkling during base aggregate course work so as to result, the respective contractor was instructed to increase the water spraying frequency at the spotted sites.
51. The result of noise quality remained more or the less same during baseline and quarterly monitoring period.
52. While the issue of microbial contamination at drinking water was resolved by fetching the filtered water for the construction crew at LOT 1 & 2 but for LOT 3, non-compliance has been issued.

4.3 Material Resources Utilization

4.3.1 Current Period

53. Key water using processes on construction sites are considered to be accommodation at workers camp, site construction activities such as asphalt, wearing course, etc., Dust suppression and on-site offices. The water consumption is estimated for workers camp, dust suppression and site offices. Due to lack of data the water usage for the asphalt wearing course or other construction activity is not reported. The water consumption is given in **Table 8**

Table 8: Water Consumption during Current Period

| Sr. No. | Activity | Water Consumption in meter cube for period July 2019 to December 2019 |
|--------------------------|-------------------------------|---|
| Package 01 | | |
| 1 | Accommodation at workers camp | 0 |
| 2 | Dust Suppression Activity | 0 |
| 3 | Site Office | 0 |
| Package 02 | | |
| 4 | Accommodation at workers camp | 0 |
| 5 | Dust Suppression Activity | 200 |
| 6 | Site Offices | 0 |
| Package 03 | | |
| 7 | Accommodation at workers camp | 0 |
| 8 | Dust Suppression Activity | 0 |
| 9 | Site Offices | 0 |
| Package 04 | | |
| 10 | Accommodation at workers camp | 250 |
| 11 | Dust Suppression Activity | 200 |
| 12 | Site Offices | 150 |
| Package 05 | | |
| 13 | Accommodation at workers camp | 0 |
| 14 | Dust Suppression Activity | 0 |
| 15 | Site Offices | 0 |
| Package 06 | | |
| 16 | Accommodation at workers camp | 200 |
| 17 | Dust Suppression Activity | 300 |
| 18 | Site Offices | 150 |
| Package 07, LOT 1 | | |
| 19 | Accommodation at workers camp | 300 |

| Sr. No. | Activity | Water Consumption in meter cube for period July 2019 to December 2019 |
|--------------------------|-------------------------------|---|
| 20 | Dust Suppression Activity | 400 |
| 21 | Site Offices | 250 |
| Package 07, LOT 2 | | |
| 22 | Accommodation at workers camp | 250 |
| 23 | Dust Suppression Activity | 300 |
| 24 | Site Offices | 200 |
| Package 07, LOT 3 | | |
| 25 | Accommodation at workers camp | 200 |
| 26 | Dust Suppression Activity | 300 |
| 27 | Site Offices | 250 |

4.4 Waste Management

54. The construction waste from the project site consists of batteries, containers/drums, excavated natural material, oil filters, motor oil, scrap material and concrete waste. The waste from offices and labour camp consists of municipal waste both solid and liquid effluent.

55. The liquid waste from camp offices has been disposed of by using the septic tank. The septic tank is present at all LOTs of the packages and liquid waste has been disposed properly.

56. Each type of solid waste has been managed separately and is discussed in **Table 9**

Table 9: General Waste Management Practice

| Sr. No | Type of Waste | Mode of Disposal/Use |
|--------|----------------------------|---|
| 1 | Batteries | Sold to the Scrap metal recyclers |
| 2 | Empty Containers/drums | Sold to the Scrap metal recyclers |
| 3 | Excavated natural material | Reused offsite |
| 4 | Oil filters | Sold to Recyclers |
| 5 | Motor Oil | Sold to oil recycler for reprocessing and recovery. |
| 6 | Scrap material | Sold to the Scrap metal recyclers |
| 7 | Concrete Waste | Reuse in pavement base and sub-base |
| 8 | Municipal Solid Waste | Disposed in Landfill site |

4.4.1 Current Period

Table 10: Waste Generation and Management during Current Reporting Period at Package 07, LOT 1, 2 & 3

| Sr. No | Type of Waste | Classification | Waste Source | Quantity | Mode of Disposal/Use |
|--------|----------------------------|--|---|---------------|---|
| 1 | Batteries | Hazardous | Power using products such as construction vehicles and generators | 3 Nos. | Sold to the Scrap metal recyclers |
| 2 | Empty Containers/ drums | Non-Hazardous (residues have been removed by washing or vacuuming) | Use to Transport and storage Fuel and lubricants | 15 Nos. | Sold to the Scrap metal recyclers |
| 3 | Excavated natural material | Non-Hazardous | From Excavation of Soil | 0 cubic meter | Reused offsite |
| 4 | Oil filters | General solid waste (non-putrescible) | From Machinery, Construction Vehicles and Generators | 30 Nos. | Sold to Recyclers |
| 5 | Motor Oil | Hazardous | From Machinery, Construction Vehicles and Generators | 200 Litres | Sold to oil recycler for reprocessing and recovery. |
| 6 | Scrap material | General solid waste (non-putrescible) | Scrape yard | 0.5 ton | Sold to the Scrap metal recyclers |
| 7 | Concrete Waste | General solid waste (non-putrescible) | culverts construction | 3 cubic meter | Reuse in pavement base and sub-base |
| 8 | Municipal Solid Waste | General solid waste | Offices, Camp Site | 3 Ton | Disposed in Landfill site |

57. The waste from empty containers can be reduced if the transport fuel could be used in tankers instead of containers. The tankers are safer to transport in comparison with containers.

58. Municipal solid waste can be reduced by using good practices such as going paperless in offices, reduce plastic bottles and reduce the number of packaging products. Moreover, the kitchen waste could be composted and use as manure in gardening.

4.5 Flora and Fauna

59. During the reporting period, no fauna was disturbed by the construction activity. No mortality of wild animals was reported. All the LOTs were on the existing alignment, therefore no major harm to fauna has occurred. All the possible adverse impacts on fish and other fauna have been addressed in the SSEMP. The environment specialist ensures the compliance of SSEMP through site visits. The EMP compliance checklist

is duly filled and reported. However, no issue/complaint related to fauna has been received up to the reporting period.

4.6 Health and Safety

4.6.1 Community Health and Safety

60. The safety of the local people is a major concern at the construction sites. The contractor has placed the safety signs (speed limits, safety cautions, safety cones, safety tapes, etc.) on active construction sites. Few of the safety signs were missing or not in proper use at package 07 for which the non-conformance notice was issued attached as Annexure II. After the non-conformance notice, the contractor successfully placed the safety signs in right places. Contractors also did regular water sprinkling at all the sites. No minor or major accident was reported from all the packages during this reporting period. The traffic operations are well on all sites since no complaint is received from the community in this regard. Furthermore, no complaints have been received of damage to public/community assets and infrastructure.

4.6.2 Worker Safety and Health

61. Implementation of EMP recommendations regarding the use of PPEs by contractor's site staff was also poor on all LOTs the packages. The Contractors have provided the PPEs to the workforce but there is a lack of implementation in wearing of PEEs. The contractor was instructed to train/motivate the workforce for the use of PPEs and responsibility should be given to the site in charge of proper implementation in wearing. However, no accident at any project has been reported during the reporting period.
62. First Aid Kits were available at campsites and work sites. A follow-up visit was also carried out to ensure compliance with the findings of the previous audit. All non-compliance matters and observations were addressed. It was advised to equip the workers with proper protective equipment, and the safety signs to display all over the area.
63. The internal training on firefighting, toolbox talks, PPEs wearing and first aid was delivered to the contractor's staff, and fire drills were also carried out to demonstrate the use of different fire safety equipment.

4.7 Physical and Cultural Relics

64. Up to date, no such sites have been discovered in the area (Package 07). If any of the physical and cultural relics are discovered at the construction sites, disposal shall be conducted according to the procedure mention in IEE as well as SSEMP.

4.8 Training

65. Regular internal HSE training was given to the workforce by the contractor's environmentalist. However, during this reporting period, the external training on HSE

and Environmental Protection were given at all LOTs of package 07. The main topics of the training were the Introduction of Health Safety, Basic First Aid, Fire Protection and Use of PPEs. Training certificates have been depicted below while other details are given in **Annexure V** which provides the photographs of the training.





4.9 Tool Box Talk (TBT)

66. The TBT is a very important tool for the awareness among the construction crew on Environmental Health and Safety so, on package 07 the TBT is continuously being conducted since the main construction work has started. The TBT includes Fire Hazards, Housekeeping, and Excavation Work for the construction of culverts, PPEs, Maintenance of construction machinery. The pictures and filled Performa of the TBT are attached in **Annexure VI**.

4.10 Consultations and Safeguard Unit (SU) Meeting

67. We have conducted different types of consultation meetings. The most prominent ones are as under:

- I. First meeting was conducted in September regarding ADB's mission. The agenda of the meeting was to overview the progress of package 01 – 06 and preparation for the efficient implementation of environmental safeguards on the new induced package 07 (LOT 1, 2 & 3) keeping in the view the strategies adopted for the previous packages.

The other discussion was about the results of pre-construction monitoring (August 2019) especially on groundwater. Microbial contamination was detected in the samples taken and for that the environmental safeguard specialist of ADB suggested to install water filtration plant for safe and hygienic potable water for the labour.

To overcome such issues, LOT 1 & 2 fetch water from nearby filtration plants. Water samples from these filtration plants were collected and tested during quarterly monitoring (December 2019) and found fit for consumption. While LOT 3 has no such facilities and still fails to install the filtration plant regarding that non-compliance notices and reminder to do so have been issued.

- II. Second meeting was held in October 2019. This was regarding the overall performance of package 01 – 07. There was no such environment concerns/discussion however, the meeting was important to avoid any unforeseen, delays in the project work.
- III. Every month meetings of SU has been conducted in PMU office which had been chaired by Deputy Director (Quality Control) along with four members including Assistant Engineers of Upper and Lower division of PMU, Resettlement & Environmental Specialist from PMC. This meeting was held to ensure that the EMPs including all proposed mitigation measures and monitoring programs are properly implemented.

5. FUNCTIONING OF THE SEMP

5.1 SEMP Review

68. The objective of establishing SEMP is not only to propose appropriate mitigation measures, but also to recommend establishment of institutions or mechanisms to monitor and ensure compliance with environmental regulations and implementation of the proposed mitigation measures with implementation schedule.

69. The contractor is mostly complying with the conditions mentioned in SEMP, However few lacking's were observed discussed below-:

- There is week implementation of PPEs found on package 05, 06 & 07 (LOT 1, 2 & 3) although the contractors were provided the PPEs to the work force and therefore negligence at the workers end. The contractor were given instruction that site supervisor should take care of these issues and enforce the use of PPEs during construction activities. After the instruction the situation on packages were much improved.
- The monthly dust and noise monitoring is recommended in SEMP, however the dust and noise monitoring was not conducted for packages 01 to 06 during this reporting period. The reason for that is the completion of main works and only allied works at few packages is in progress. However at Package 07 quarterly monitoring have been conducted and results are within the SEQS but still need attention towards particulate matter concentration.
- In the SEMP's, use of LPG cylinders was recommended, whereas use of wood as fuel was discouraged. Use of wood was observed at LOT 3 camp site due to non-availability of LPG cylinders. Contractors were advised to avoid any wood burning.

70. The SEMP covered all the aspects and has been effective and also the project (except package 07) is on finishing stage therefore no change is recommended.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

71. During reporting period no examples of good practice could be presented. All performance was implemented within planned activities.

6.2 Opportunities for Improvement

72. Contingency and miscellaneous cost has been allocated in the EMP Mitigation and Monitoring cost. As the package 07 is in initial stage of construction therefore it is recommended to use this cost in indigenous tree plantation along the sides of the road.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

73. During this reporting period, most of the activities of road works constructions were completed for package 01, 03 & 05 and only allied works at package 02, 03 & 04 is in progress. Package 07 is in initial phase of construction as 25 % work has been done so hence at this stage of the construction, the contractors have partially fulfilled their duties about Environment, Health and Safety issues but now things are better and contractor is giving full attention to the mitigation measures and implementation of environmental management and monitoring plan.
74. Field inspections by the PMU, PMC & Contractor Environmental staff, were regularly made. Each of these has assigned managers in charge of environmental management. They also serve as grievance focal points.
75. Project and contact information has been posted in the bulletin boards at all construction sites. Public complaints can also be lodged in register and telephone. To date, all the public complaint received has been resolved efficiently.
76. The pre-construction and quarterly environmental monitoring have been conducted at package 07 all LOTs.
77. The issue of the housekeeping, dust and signage and bifurcation were found on package 04, 06 & 07 (LOT 1, 2 & 3) for which the non-conformance notice was issued after which the contractor has taken the measures and issues were successfully closed as narrated in compliance status reports of LOT 1, 2 & 3.
78. Main Contractors camps and labour camps, storage areas and vehicle/machinery places are being maintained according to the prevailing environment, health and safety standards.
79. All the HSE component status, during the reporting period, is satisfactory. No major complaint and accident has been reported.
80. Copy of the SSEMP, Camp Site Guidelines, and Grievance Register, monthly Compliance Checklists were available at all the sub projects. A person designated from the contractor's side was present at each site to coordinate implementation of SSEMP recommendations and any first aid related issues.
81. No noise and vibration-related complaints from the public or workers were registered.
82. Construction activities close to populated areas were limited to daylight hours only to minimize the impact of noise. The contractors should adhere to the agreement to avoid any social conflict.
83. No surface water or groundwater contamination was reported due to oil spillages, solid waste dumping or asphalt lying during the reporting period. However, it is recommended spill control equipment should be ensured at each campsite.

84. No fauna was disturbed by the construction activity. No mortality of wild animals was reported.
85. No cultural heritage sites/ wetland/ protected area/ mangrove/ estuarine lies in RoW of any of the subproject alignment.
86. No damage to the agricultural land due to borrow pits or topsoil erosion was reported.
87. The use of PPEs by contractor's site staff still requires improvement. The Contractor have provided the PPEs to the workforce but instructed to train / motivate the workforce for the use of PPEs and responsibility should be given to the site in charge of proper implementation in wearing.
88. During construction, special attention has been given in the areas where there are encroachments on the roads side, to minimize the impact on the livelihood of the locals. The contractors have aware of the problem and work accordingly.
89. The construction waste from the project site consists of asphalt waste, batteries, containers/drums, excavated natural material, oil filters, motor oil, scrap material and concrete waste. The waste from offices and labour camps consists of the municipal waste both solid and liquid effluent. All waste has been disposed of as per the plan.
90. Traffic management and safety are being given the topmost priority in the overall project corridor.
91. Child labor was not observed on any subproject. Contractors were advised to discourage child labor in the future as well. It was advised that Identity verification should be carried out prior to hiring and the record should be maintained.
92. No complaints regarding the transmission of Communicable diseases (such as STI's and HIV/AIDS) were reported.
93. No ozone-depleting substances are used. Only approved substances (chemicals and technologies) are used having negligible significance to climate change.
94. Overall no major conflict with the community was observed which related to the environment, health and safety. Cordial liaison has been maintained with the local community.

7.2 Recommendations

95. All the plans established in SSEMP(s) must be implemented in full swing.
96. Regular internal and external audits are required along with routine visual inspections and monitoring. Contractors are advised to motivate and train staff for the use of PPEs.
97. Traffic management and safety should be the topmost priority in the overall project corridor. The Traffic Management Plan should be available at all sites.
98. Spill control equipment should be ensured at each campsite.




ANNEXURES

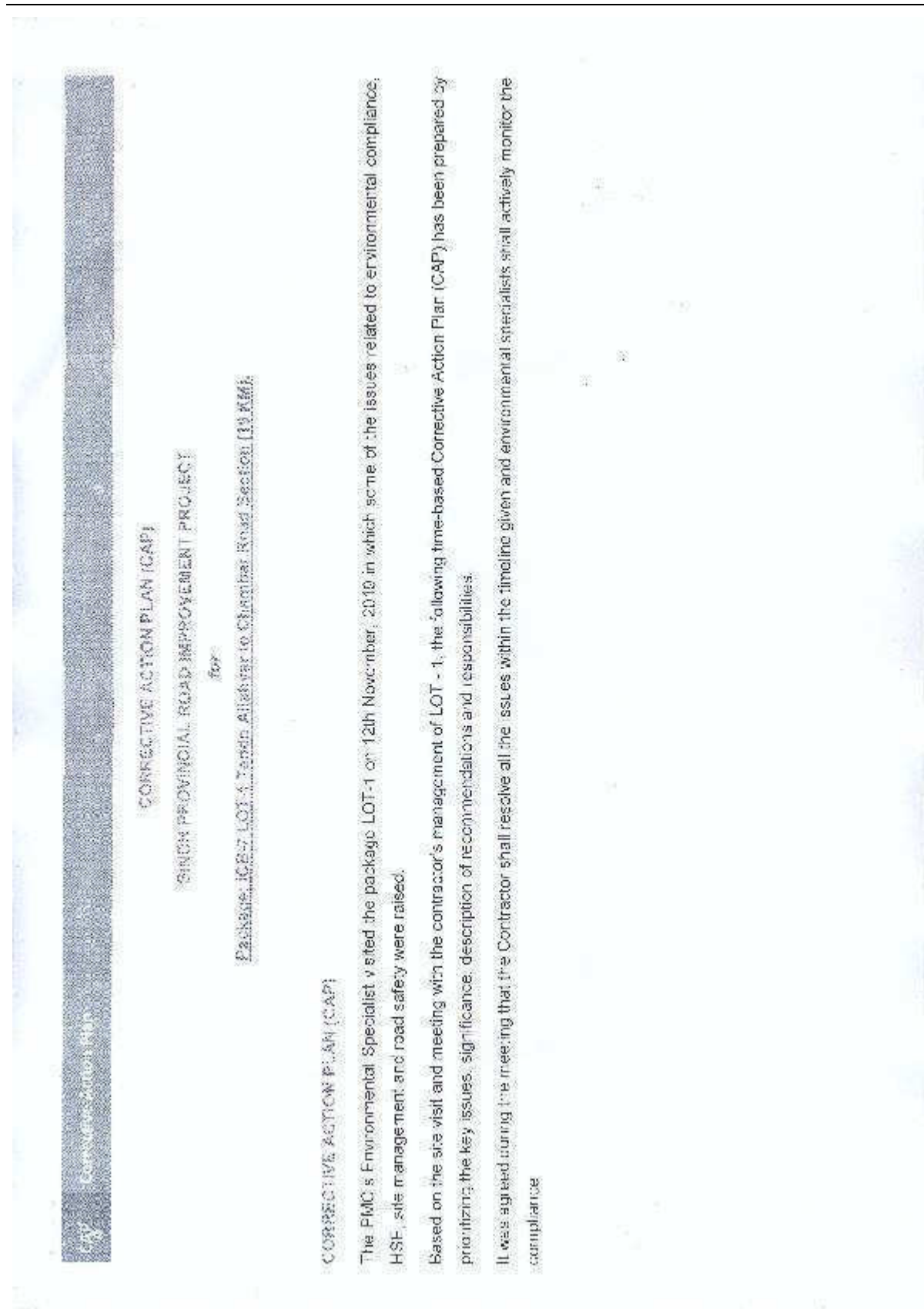
ANNEXURE – I

CORRECTIVE ACTION PLAN (CAP) & COMPLIANCE STATUS REPORT (CSR)

ANNEXURE - I: Corrective Action Plan & Compliance Status Report





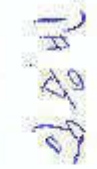
Package – 07 LOT 1

| | |
|--|---|
| Project Management Consultant Sindh Provincial Roads Improvement Project | |
|  Yoochin ENGINEERING CORPORATION | <i>in association with</i>  UMAR MUNSHI ASSOCIATES CONSULTING ENGINEERS, ARCHITECTS & PLANNERS |
| <hr/> | |
| PMC-SPRIP-SV16-001/07-LOT-1/ 2354 | Dated: December 20, 2019 |
| Resident Engineer-III Tando Allahyar | |
| SUB: <u>ADB - ASSISTED, SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT</u> <u>(SPRIP) LOAN NO 3305-PAK.</u> ICB-07: LOT-1 TANDO ALLAHYAR TO CHAMBER ROAD SECTION (KM 19) CORRECTIVE ACTION PLAN (CAP). | |
| Enclosed please find herewith a copy of Corrective Action Plan (CAP) duly signed by the Contractor and PMC to be implemented at site as agreed with PMU and ADB during inspection of the respective package for immediate necessary action. | |
| Please advise the contractors concerned under your jurisdiction for immediate implementation of the corrective action plan on top priority basis. | |
|  Im, Seung Bin Team Leader For, Project Management Consultants (SPRIP) Hyderabad | |
| Cc: along with copy of enclosure to: ➤ Project Manager ICB-07-LOT-01 | |
| Copy for information: ➤ Project Director (PMU-SPRIP) Works & Services Department, Hyderabad ➤ XEN (Upper) Division (PMU-SPRIP) Works & Services Department, Hyderabad ➤ Mr. Sameen Khokhar Environment Specialist (PMC-SPRIP) Hyderabad | |
| <hr/> | |
| Head Office: Bungalow No. 109, Sindhi Muslim Housing Society, Qasimabad Hyderabad Phone : 022-2102772, 022-2102992, Email: pmc.sprp@gmail.com | |
| Page 1 of 1 | |







Corrective Action Plan (CAP) for Package 02 LOT-4

| Environmental Issue | Non-Compliance Details | Severity | Responsible | Frequency | Time |
|---|---|----------|-------------------------------|------------------|------|
| Documentation | | | | | |
| Status of Daily Environment checklist is not updated. | Project Manager has strictly instruct the contractor environment engineer to fill reports as per the requirements of the PMO and be in continuous contact with PMO Environment Specialist | High | HSE Engineer | Daily | |
| Weekly Reports are not as per schedules. | Project Manager should have a meeting with PMO Environment Specialist & own environment to get mutual understanding on report format. PMO EE has guided the contractor engineer in filling reports | High | HSE Engineer | Weekly | |
| Copy SSEMP is not provided at the roadside | The copy of SSEMP must be available for ready reference at camp already unfortunately at a time visit was not there. HSE Engineer should have been given one table if any anything related to HSE is placed | Moderate | HSE Engineer Site Incharge, | 1 Week | |
| Emergency numbers (some are not depicted) | The Missing Emergency numbers should be posted. | Low | HSE Eng neer, Project Manager | 1 week (Signage) | |

| | | | | | |
|--|--|--|---|--|------------|
|  |  |  |  |  | 20/12/2019 |
| Project Manager | HSE Engineer | PMO Environment Specialist | HSE Engineer | Project Manager | |
| Project Manager | HSE Engineer | PMO Environment Specialist | HSE Engineer | Project Manager | |

| Complaints/Issues | Measures and Corrective Actions | Significance | Responsible | Timeline |
|--|--|---|--|---|
| <p>Camel's first aid kit is missing</p> <p>Direction to get to hospital is missing</p> <p>Narrow area & the material dump has not been properly fenced.</p> <p>Building Camp arrangement is not fit to guard off the weather & cold.</p> <p>The waste disposal is not hygienic</p> | <p>Kit must be available for the active construction sites</p> <p>Printed the hospital direction should be posted.</p> <p>Relocating of fencing of borrow area and material dump site reduces the risk of hazard, this should be done properly</p> <p>Windows have to be fixed</p> <p>Project Manager issued strict instructions to provide bins where needed. He must instruct the LL to make sure the hygienic disposal of waste</p> | <p>Low</p> <p>Low</p> <p>High</p> <p>Moderate</p> <p>High</p> | <p>HSE Engineer, Site Incharge, Construction Manager</p> <p>HSE engineer</p> <p>HSE Engineer, Construction Manager, Project Manager</p> <p>HSE Engineer, Project Manager</p> <p>HSE Engineer, Camp Construction Manager, Project Manager</p> | <p>2 days</p> <p>1 day</p> <p>Immediate</p> <p>3 days</p> <p>1 week</p> |

| | | | | |
|--|--|--|--|-----------------|
|  |  |  |  | 20/12/2019 |
| Project Manager | Project Manager | Project Manager | Project Manager | Project Manager |
| Project Manager | Project Manager | Project Manager | Project Manager | Project Manager |
| Project Manager | Project Manager | Project Manager | Project Manager | Project Manager |
| Project Manager | Project Manager | Project Manager | Project Manager | Project Manager |

**Project Management Consultant
Sindh Provincial Roads Improvement Project**



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PMC-SPRIP-SV16-001/07-LOT-1/2359

Dated: December 23, 2019

Project Manager
ICB-07-LOT-01
M/S Umar Jan & Co
M/S Noor-ul-Haq & Brother [Joint Venture]
Tando Allahyar District Tando Allahyar

**SUB: ADB - ASSISTED, SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT
[SPRIP] LOAN NO 3305-PAK
ICB-07: LOT-1 TANDO ALLAHYAR TO CHAMBER ROAD SECTION (KM 19)
COMPLIANCE STATUS REPORT (CSR)**

Ref: *This office letter no. PMC-SPRIP-SV16-001/07-LOT-1/2354 dated 20-12-2019*

According to the Corrective Action Plan (CAP) sent earlier, many of the non-compliances have been solved. However, many critical issues have not been solved yet as mentioned in Compliance Status Report (CSR).

You are directed to make sure the compliance of the mentioned shortcomings and report its status to RE.

The RE is also intended to enforce the compliance (CSR) and report to PMC.

It is also informed to you that without compliance of environmental conditions as mentioned in SSEMP, the work will be stopped under ADB safeguard policy.

Waiting for your prompt response.

Im, Seung Bin
Team Leader
For, Project Management Consultants (SPRIP)
Hyderabad

Encl: As above

Cc.

- Project Director (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Upper) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- Resident Engineer-III, Tando Allahyar
- Mr. Samoon Khokhar Environmental Specialist (PMC-SPRIP), Hyderabad

Head Office: Bungalow No. 109, Sindhi Muslim Housing Society, Qasimabad Hyderabad
Phone : 022-2102772, 022-2102992, Email: pmc.sprp@gmail.com

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CSR Compliance Status Report on Corrective Action Plan

COMPLIANCE STATUS REPORT (CSR)

ON

CORRECTIVE ACTION PLAN (CAP)

SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT

FOR

PACKAGE: ICB-07 LOT-1 TANDO ALLAHYAR TO CHAMBAR ROAD SECTION (19 KM).

Compliance Status Report (CSR)

PMC's Environmental Specialist visited the package LOT-1 on 12th November 2019 in which some of the issues related to environmental compliance, HSE, site management and road safety was raised.

Based on the site visit and meeting with the contractor's management of LOT - 1, the following time-based Corrective Action Plan (CAP) has been prepared by prioritizing the key issues, significance, description of recommendations and responsibilities.

It was agreed during the meeting that the Contractor shall resolve all the issues within the timeline given and environmental specialists shall actively monitor the compliance.

In order to check the Compliance Status of CAP, the Environmental Specialist again visited the ICB-07, LOT-1 on 18th December 2019. This report has been prepared after the visit with respect to the CAP.

Compliance Status against each condition of CAP is given as under:-

| CSR Compliance Status Report on Corrective Action Plan | | | |
|--|---|-----------|-------------------|
| Corrective Action Plan (CAP) for Package 07 LOT-1 | | | |
| Environmental Issues | Measures and Corrective Actions | Timeline | Compliance Status |
| Documentation | | | |
| Status of Daily Environment checklist is not updated. | Project Manager has to strictly instruct the contractor environment engineer to fill reports as per the requirements of the PMC and be in continuous contact PMC Environment Specialist | Daily | Completed |
| Weekly Reports are not as per schedules. | Project Manager should have a meeting with PMC Environment Specialist & own environment to get a mutual understanding on report format PMC EE has guided the contractor engineer in filling reports. | Weekly | Completed |
| Copy SSEMP is not provided at the campsites. | The copy of SSEMP must be available for ready reference at camp already unfortunately at a time visit was not there, HSE Engineer should have been given one table there anything related to HSE is placed. | 1 Week | Completed |
| Emergency Numbers (some are not depicted) | The Missing Emergency numbers should be posted. | 1 week | Completed |
| Campsite | | | |
| Campsite first aid kit is missing. | Kit must be available for the active construction sites. | 2 days | Completed |
| Direction to get to the hospital is missing. | Printed the hospital direction should be posted. | 1 day | Completed |
| Borrow area & the material dump has not been properly fenced. | Ribboning of fencing of borrow area and material dump site reduces the risk of hazard, this should be done properly. | Immediate | |
| Building Camp arrangement is not fit to guard off the weather effects. | Windows have to be fixed. | 3 days | Completed |
| The waste disposal is not hygienic. | Project Manager must be issued strict instructions to provide bins where needed, he must instruct the EE to make sure the hygienic disposal of waste. | 1 week | Completed |

| CSR Compliance Status Report on Corrective Action Plan | | | | |
|--|---|-----------|--|--|
| Environmental Issues | Measures and Corrective Actions | Timeline | Compliance Status | |
| Road Site Signage for safety has not been placed at the campsite. The safety sign present the critical alerts and can lead to disastrous situations. | The safety sign boards including Hazard Warning, PPE clean environment, fire extinguishers and assembly points should be placed at the campsite. | 3 days | Partial Completed (PPEs, regular TBT, Spill kit tray, etc. missing) | |
| No containment was present for the diesel tank which may cause risk of the oil spill and pose a threat to health safety and environment. | Oil containment in the form of concrete or Molten Steel plates should be constructed beneath the furnace oil tank. The containment has at least capacity of 50% storage capacity with respect to the diesel oil tank. | 3 Weeks | Completed | |
| Signage is missing at the campsite and road site. | More signboards should be placed at site. | Immediate | Partial Completed (Essential Roadside signage is missing like speed limits, men at work, etc.) | |

Package – 07 LOT 2

**Project Management Consultant
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CONSULTING ENGINEERING ARCHITECTS & PLANNERS



PMC-SPRIP-SV16-001/07-LOT-2&3/2355

Dated: December 20, 2019

Resident Engineer-II
Sukkur / Dadu

**SUB: ADB - ASSISTED, SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT
(SPRIP) LOAN NO 3305-PAK
ICB-07: LOT-3 JEHAN KHAN TO FAIZU LARO VIA CHAK RUSTAM
ROAD SECTION (29.1 KM)
ICB-07: LOT-2 SEHWAN RAILWAY CROSSING (N-55) TO DADU VIA
TALTI UPTO DADU - MORO ROAD SECTION (32 KM)
CORRECTIVE ACTION PLAN (CAP).**

Enclosed please find herewith a copy of Corrective Action Plan (CAP) duly signed by the Contractor and PMC to be implemented at site as agreed with PMU and ADB during inspection of the respective packages for immediate necessary action.

Please advise the contractors concerned under your jurisdiction for immediate implementation of the corrective action plan on top priority basis.

Im, Seung Bin
Team Leader
For, Project Management Consultants (SPRIP)
Hyderabad

Cc: along with copy of enclosure to:

- Project Manager ICB-07- LOT-02
- Project Manager ICB-07- LOT-03

Copy for information:

- Project Director (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Upper) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Lower) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- Mr. Sameen Khokhar Environment Specialist (PMC-SPRIP) Hyderabad

Head Office: Bungalow No. 109, Sindhi Muslim Housing Society, Qasimabad Hyderabad
Phone : 022-2102772, 022-2102992, Email: pmc.sprp@gmail.com

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| | |
|-------------------------------------|--|
| CAP Corrective Action Plan | <p>CORRECTIVE ACTION PLAN (CAP) SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT for PACKAGE: ICB-7 LOT-2 SEHWAN TO DADU ROAD VIA TALTI (32 KM)</p> |
| CORRECTIVE ACTION PLAN (CAP) | <p>The PMC's Environmental Specialist visited the package LOT-2 on 14th November 2019 in which some of the issues related to environmental compliance, HSE, site management and road safety were raised.</p> <p>Based on the site visit and meeting with the contractor's management of LOT - 2, the following time-based Corrective Action Plan (CAP) has been prepared by prioritizing the key issues, significance, description of recommendations and responsibilities.</p> <p>It was agreed during the meeting that the Contractor shall resolve all the issues within the timeline given and environmental specialists shall actively monitor the compliance.</p> |

CAP Corrective Action Plan






Corrective Action Plan (CAP) for Package 07 LOT-2.

| Environmental Issues | Measures and Corrective Actions | Significance | Responsibilities | Timeline |
|--|---|--------------|---|----------|
| Road Site Safety signs are not present on entire length of the road. The safety signs on roads and active construction sites are critical and lead to the fatal accident if not present. | Safety Signs e.g. construction works ahead, caution and Speed Slowly should be placed at start on both ends of the road. The safety signs of Construction Works Ahead/Cautions, Speed Slowly and Speed Limit should also be placed in range of 500 to 100 meter before every active construction site. The site safety signs including wearing helmets safety shoes and protective clothing should also be placed at all active construction sites. All safety signs have adequate illumination and size should be appropriate for intended viewing from the distance. The sign boards including Hazard Warning, Speed Slowly and Speed Limit should also be placed in range of 500 to 100 meter before the bridge. The bridge at RD 6+280 to 6+300 has to be reconstructed but at this stage to bring safety for traffic to be passed on the bridge, the bridge should be cordoned off with the reflectors. The traffic control wardens should be positioned with reflectors at both ends of bridge in order to have better traffic management. | High | HSE Engineer, Incharge, Construction Manager, Project Manager | 1 Week |
| The HSE conditions of the bridge at RD 5+042 and 6+280 to 6+300 km are very unsatisfactory. The traffic also has bottle neck to pass from the bridge which may have risk of road accidents. | | High | HSE Engineer, Incharge, Construction Manager, Project Manager | 1 Week |

| | | | | |
|---|---|---|--|---|
| Signature of Authorized Person: | | | | |
|  |  |  |  |  |
| Project Management Consultants (PMC) Hyderabad Environmental Specialist | Project Management Consultants (PMC) Resident Engineer (RE) | ACS SPRIP 35, LOT-2 W&S DOP SE (W) Project Manager | ACS SPRIP 07, LOT-2 W&S DOP SE (W) Environmental/HSE Engineer | Project Management Unit (PMU) W&S DOP Hyderabad |
| Sindh Provincial Road Improvement Project | | | | Page 2 |

| CAP Corrective Action Plan | | | | |
|---|--|--------------|--|---|
| Environmental Issues | Measures and Corrective Actions | Significance | Responsibilities | Timeline |
| Steel dowels and open excavation is observed and unattended at RD 2+970 Km. Borrow area & material dump has not been properly fenced. | The steel dowels should be cordoned off with caution tape in order to avoid any accident. It is best where steel dowels are present should be removed by cutting it off or by properly finishing. Ribbing of fencing of borrow area and material dump site reduces the risk of hazard, this should be done properly. | High | HSE Engineer, Site Incharge, Construction Manager, Project Manager | Immediate |
| Mixing Machine was placed and working in the middle of the road at RD 6+300 Km poses a high risk to the visitors passing on the road. | The mixing machine should be placed on extreme corner of the road so that the commuters may not be disturbed and also eliminating the risk of accidents. | High | HSE Engineer Site Incharge, Construction Manager, Project Manager | Immediate |
| The excavation works on the culverts have taken more than 70 % space of existing road instead of taking 50 % in accordance with the Traffic Management Plan. This factor becomes the bottleneck at the culverts and poses the risk of traffic jam and accident. | The shoulders have to open in order to ease in traffic. Further the signage of Hazard Warning Speed Slowly and Speed Limit should be placed before culverts in range of 500 to 100 meters. The contractor should deputize the traffic control persons with reflectors in order to avoid traffic jam and accidents. For next excavation for new culverts the maximum of 80-40 ratio should maintained with shoulders to be opened at non-active site. | High | HSE Engineer Site Incharge, Construction Manager, Project Manager | 1 week (Signage) 3 Weeks (Shoulders) Immediate (Traffic Warden) |

| Signature of Authorized Person | | | | |
|--|--|---|--|---|
| Project Management Unit Sindh Provincial Road Improvement Project Environmental Specialist | Project Management Unit Sindh Provincial Road Improvement Project Resident Engineer (RE) | Project Management Unit Sindh Provincial Road Improvement Project Project Manager | Project Management Unit Sindh Provincial Road Improvement Project Environmental/HSE Engineer | Project Management Unit Sindh Provincial Road Improvement Project Team Leader |
| 20/12/2019 | 20/12/2019 | 20/12/2019 | 20/12/2019 | 20/12/2019 |
| 3 | 3 | 3 | 3 | 3 |

| CAP Corrective Action Plan | | | | |
|---|--|---|---|---|
| Environmental Issues | Measures and Corrective Actions | Significance | Responsibilities | Timeline |
| Batching Plant | | | | |
| No signage for safety has been placed at the batching plant. The safety signs present the critical alerts can lead to disastrous situations if it is not present. | The safety sign boards including Hazard Warning, PPE's, clean environment, fire extinguishers and assembly points should be placed at the concept batching plant | High | HSE Engineer, Site Incharge, Construction Manager, Project Manager | 1 Week |
| Asphalt and Batching Plants are not in working condition. | When both plants will works, HSE engineer should maintain housekeeping, conduct training/TBT to aware staff and workers about safe work and will mitigate all seen in seen events. | No | HSE Engineer, Site Incharge, Construction Manager, Project Manager | Action taken when plant operated |
| Camp Site | | | | |
| Only onfirst aid box is present in the camp area. No first aid wasavailable for field staff. This is important because the workplace could pose a risk of causing injury or illness to workers and staff. | First aid kits should be fully stocked and readily available on active construction site at all times to treat superficial injuries that don't require emergency attention. | High | HSE Engineer, Site Incharge, Construction Manager, Project Manager | Immediate |
| No emergency number posted at the campsite and no information displayed for the nearby hospital. | Emergency number should be placed that provides information on emergency exits and also provides information about nearby by hospital. | Moderate | HSE Engineer, Site Incharge, Construction Manager, Project Manager | 1 Week |
| Signature of Authorized Person: | | | | |
|  |  |  |  |  |
| Project Management Consultants (PMC) Hydrologic Environmental Specialist | Project Management Consultants (PMC) Resident Engineer (RE) | Project Management Consultants (PMC) Project Manager | Project Management Consultants (PMC) Environmental/HSE Engineer | Project Management Unit (PMU) HSE Officer |
| Sindh Provincial Road Improvement Project | | | | Page 4 |

**Project Management Consultant
Sindh Provincial Roads Improvement Project**



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CONSULTING ENGINEERS, ARCHITECTS & PLANNERS



PMC-SPRIP-SV16-001/07-LOT-2/2360

Dated: December 23, 2019

Project Manager

ICB-07: LOT-2

M/s Jiangsu Haitong Construction Engineering CO Ltd in (JV) with

M/s Nauman Construction Company & M/s Shah Builders

Office No. 17, 2nd Floor Al-Hameed,

Shopping Mall, G-11 Markaz Islamabad

**SUB: ADB - ASSISTED, SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT
(SPRIP) LOAN NO 3305-PAK.**

**ICB-07: LOT-2 SEHWAN RAILWAY CROSSING (N-55) TO DADU VIA
TALTI UPTO DADU - MORO ROAD SECTION (32 KM)**

COMPLIANCE STATUS REPORT (CSR)

Ref: This office Letter No. PMC-SPRIP-SV16-001/07-LOT-2&3/2355 dated 20-12-2019

According to the Corrective Action Plan (CAP) sent earlier, many of the non-compliances have being solved. However, many critical issues have not been solved yet as mentioned in Compliance Status Report (CSR).

You are directed to make sure the compliance of the mentioned shortcomings and report its status to RE.

The RE is also intended to enforce the compliance (CSR) and report to PMC.

It is also informed to you that without compliance of environmental conditions as mentioned in SSEMP, the work will be stopped under ADB safeguard policy.

Waiting for your promote response.

Im, Seung Bin

Team Leader

For, Project Management Consultants (SPRIP)

Hyderabad

Encl: As Above

Cc.

- Project Director (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Lower) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- Resident Engineer-II, Sukkur
- Mr. Sameen Khokhar Environmental Specialist (PMC-SPRIP), Hyderabad

Head Office: Bungalow No. 109, Sindhi Muslim Housing Society, Qasimabad Hyderabad
Phone : 022-2102772, 022-2102992, Email: pmc.srip@gmail.com

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CSR Compliance Status Report on Corrective Action Plan

COMPLIANCE STATUS REPORT (CSR)

ON

CORRECTIVE ACTION PLAN (CAP)

SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT

FOR

PACKAGE: ICB-7 LOT-2 SEHWAN TO DADU ROAD VIA TALTI (32 KM)

Compliance Status Report (CSR)

The PMC's Environmental Specialist visited the package LOT-2 on 15th November, 2019 in which some of the issues related to environmental compliance, HSE, site management and road safety were raised.

Based on the site visit and meeting with the contractor's management of LOT - 2, the following time-based Corrective Action Plan (CAP) has been prepared by prioritizing the key issues, significance, description of recommendations and responsibilities.

It was agreed during the meeting that the Contractor shall resolve all the issues within the timeline given and environmental specialists shall actively monitor the compliance.

In order to check the Compliance Status of CAP, the Environmental Specialist again visited the ICB-07, LOT-2 on 21st December, 2019. This report has been prepared after the visit with respect to the CAP.

Compliance Status against each condition of CAP is given as under:-

| CSR Compliance Status Report on Corrective Action Plan | | | |
|--|---|------------------|---|
| Compliance Status Report (CSR) for Package-07, LOT-2 | | | |
| Environmental Issues | Measures and Corrective Actions | Timeline | Compliance Status |
| Documentation Safety signs are not present on entire length of the road. The safety signs on roads and active construction sites are critical and lead to the fatal accident if not present. | Safety Signs e.g. construction works ahead, caution and Speed Slowly should be placed at start on both ends of the road. The safety signs of Construction Works Ahead, Cautions, Speed Slowly and Speed Limit should also be placed in range of 500 to 100 meter before every active construction site. The site safety signs including wearing helmets, safety shoes and protective clothing should also be placed at all active construction sites. All safety signs have adequate illumination and size should be appropriate for intended viewing from the distance. | 1 Week | Completed |
| The HSE conditions of the bridge at RD 5+042 and 6+280 To 6+300 km are very unsatisfactory. The traffic also has bottle neck to pass from the bridge which may have risk of road accidents. | The sign boards including Hazard Warning, Speed Slowly and Speed Limit should also be placed in range of 500 to 100 meter before the bridge. The bridge at RD 6+280 to 6+300 has to be reconstructed but at this stage to bring safety for traffic to be passed on the bridge, the bridge should be cordoned off with the reflectors. The traffic control wardens should be positioned with reflectors at both ends of bridge in order to have better traffic management. | 1 Week | Partially Completed (Completed some technology is missing) |
| Steel dowels and open excavation is observed and unattended at RD 2+970 Km Borrow area & material dump has not been properly fenced | The steel dowels should be cordoned off with caution tape in order to avoid any accident. It is best where steel dowels are present should be removed by cutting it off or by properly finishing. Ribburing of fencing of borrow area and material dump site reduces the risk of hazard, this should be done properly. | Immediate | Completed |
| Mixing Machine was placed and working in the middle of the road at RD 6+300 Km poses a high risk to the visitors passing on the road. | The mixing machine should be placed on extreme corner of the road so that the commuters may not be disturbed and also eliminating the risk of accidents. | Immediate | Completed |
| The excavation works on the culverts have taken more than 70 % space of existing | The shoulders have to be opened in order to ease in traffic. Further the signage of Hazard Warning, Speed Slowly and Speed Limit | 1 week (Signage) | Completed |

| CSR Compliance Status Report on Corrective Action Plan | | | |
|--|---|---|----------------------------|
| Environmental Issues | Measures and Corrective Actions | Timeline | Compliance Status |
| road instead of taking 50 % in accordance with the Traffic Management Plan. This factor becomes the bottleneck at the culverts and poses the risk of traffic jam and accident. | should be placed before culverts in range of 500 to 100 meters. The contractor should deploy the traffic control persons with reflectors in order to avoid traffic jam and accidents. For next excavation for new culverts the maximum of 60-40 ratio should maintained with shoulders to be opened at non-active site. | 3 Weeks (Shoulders) Immediate (Traffic Warden) | |
| Batching Plant | | | |
| No signages for safety has been placed at the batching plant. The safety signs present the critical alerts can lead to disastrous situations if it is not present. Asphalt and Batching Plants are not in working condition. | The safety sign boards including Hazard Warning, PPE's, clean environment, fire extinguishers and assembly points should be placed at the concert batching plant. When both plants will works, HSE engineer should maintain housekeeping, conduct training/TBT to aware staff and workers about safe work and will mitigate all seen un seen events. | 1 Week Action taken when plant operated | |
| Campsite | | | |
| Only one first aid box is present in the camp area. No first aid was available for field staff. This is important because the workplace could pose a risk of causing injury or illness to workers and staff. No emergency number posted at the campsite and no information displayed for the nearby hospital. No containment was present for the diesel tank which may cause risk of the oil spill and pose a threat to health safety and environment. | First aid kits should be fully stocked and readily available on active construction site at all times to treat superficial injuries that don't require emergency attention. Emergency number should be placed that provides information on emergency exits and also provides information about nearby hospital. Oil containment in form of concrete or Molten Steel plates should be constructed beneath the furnace oil tank. The containment has at least capacity of 50% storage capacity with respect to the diesel oil tank. | Immediate 1 Week 3 Weeks | Completed Completed |
| Road Site | | | |
| Steel dowels and open excavation is | The steel dowels should be curdon off with caution tape in | 3 days | Completed |
| Sindh Provincial Road Improvement Project (SPRIP) - Compliance Status Report on Corrective Action Plan | | | Page 2 |

| CSR Compliance Status Report on Corrective Action Plan | | | |
|---|---|-----------|-------------------|
| Environmental Issues | Measures and Corrective Actions | Timeline | Compliance Status |
| observed and unattended at RD 2+970 Km Borrow area & material dump has not been properly fenced | order to avoid any accident. It is best where steel dowels are present should be remove by cutting it off or by properly finishing. Ribboning of fencing of borrow area and material dump site reduces the risk of hazard, this should be done properly. The mixing machine should be placed on extreme corner of the road so that the commuters may not be disturbed and also eliminating the risk of accidents. | | |
| Mixing Machine was placed and working in the middle of the road at RD 6+300 Km poses a high risk to the visitors passing on the road. | | 3 Weeks | Completed |
| The excavation works on the culverts have taken more than 70 % space of existing road instead of taking 50 % in accordance with the Traffic Management Plan. This factor becomes the bottleneck at the culverts and poses the risk of traffic jam and accident. | The shoulders have to open in order to ease in traffic. Further the signage of Hazard Warning, Speed Slowly and Speed Limit should be placed before culverts in range of 500 to 100 meters. The contractor should depute the traffic control persons with reflectors in order to avoid traffic jam and accidents. For next excavation for new culverts the maximum of 60-40 ratio should maintained with shoulders to be opened at non-active site. | Immediate | Completed |

Package – 07 LOT 3

**Project Management Consultant
Sindh Provincial Roads Improvement Project**



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ENGINEERING CORPORATION

in association with



UMAR MUNSHI ASSOCIATES
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS



PMC-SPRIP-SV16-001/07-LOT-2&3/2355

Dated: December 20, 2019

Resident Engineer-II
Sukkur / Dadu

**SUB: ADB - ASSISTED, SINDH PROVINCIAL ROAD IMPROVEMENT PROJECT
[SPRIP] LOAN NO 3305-PAK
ICB-07: LOT-3 JEHAN KHAN TO FAIZU LARO VIA CHAK RUSTAM
ROAD SECTION (29.1 KM)
ICB-07: LOT-2 SEHWAN RAILWAY CROSSING (N-55) TO DADU VIA
TALTI UPTO DADU - MORO ROAD SECTION (32 KM)
CORRECTIVE ACTION PLAN (CAP).**

Enclosed please find herewith a copy of Corrective Action Plan (CAP) duly signed by the Contractor and PMC to be implemented at site as agreed with PMU and ADB during inspection of the respective packages for immediate necessary action.

Please advise the contractors concerned under your jurisdiction for immediate implementation of the corrective action plan on top priority basis.

Im, Seung Bin
Team Leader
For, Project Management Consultants (SPRIP)
Hyderabad

Cc: along with copy of enclosure to:

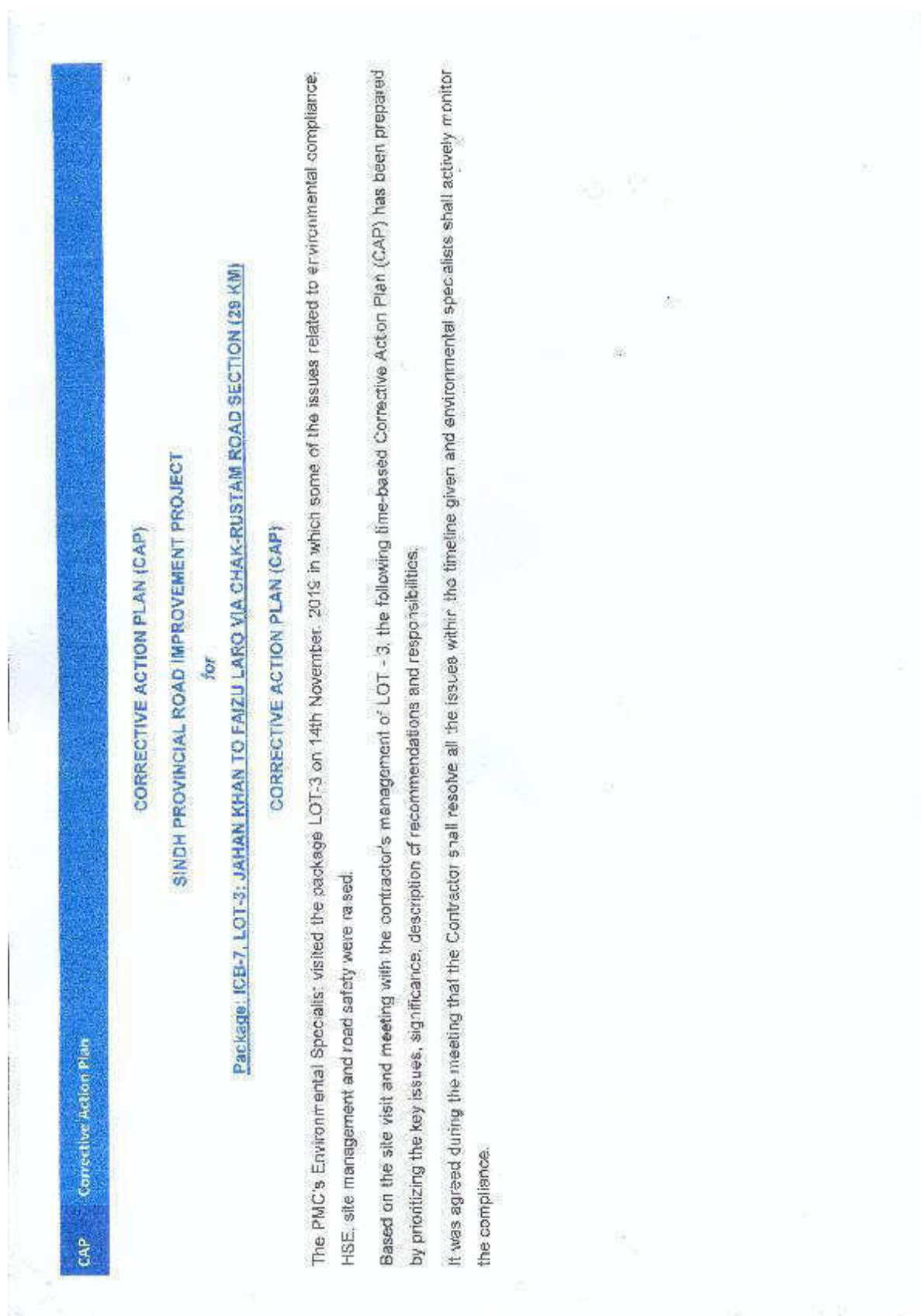
- Project Manager ICB-07- LOT-02
- Project Manager ICB-07- LOT-03

Copy for information:

- Project Director (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Upper) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- XEN (Lower) Division (PMU-SPRIP) Works & Services Department, Hyderabad
- Mr. Samcen Khokhar Environment Specialist (PMC-SPRIP) Hyderabad

Head Office: Bungalow No. 109, Sindhi Muslim Housing Society, Qasimabad Hyderabad
Phone : 022-2102772, 022-2102992, Email: pmc.srip@gmail.com

Page 1 of 1



Corrective Action Plan (CAP) for Package 07 LOT-3

| Environmental Issues | Measures and Corrective Actions | Significance | Responsibilities | Timeline |
|---|---|--------------|-------------------------------|------------------|
| Documentation | | | | |
| Status of Daily Environment checklist is not updated. | Project Manager has to strictly instruct the contractor environment engineer to fill reports as per the requirements of the PMC and be in continuous contact PMC Environment Specialist. | High | HSE Engineer | Daily |
| Weekly Reports are not as per schedules | Project Manager should have a meeting with PMC Environment Specialist & own environment to get mutual understanding on report format. PMC EE has guided the contractor engineer in filling reports. | High | HSE Engineer | Weekly |
| Copy SSEMP is not provided at the campsites | The copy of SSEMP must be available for ready reference at camp a ready unfortunately at a time visit was not there, HSE Engineer should have been given one table there anything related to HSE is placed. | Moderate | HSE Engineer, Site Incharge | 1 Week |
| Emergency Numbers (some are not depicted) | The Missing Emergency numbers should be posted. | Low | HSE Engineer, Project Manager | 1 week (Signage) |

| | | | | |
|--|--|--|--|--|
| Signature of Authorized Person | | | | |
|  |  |  |  |  |
| Project Management Consultants (PMC) Hyderabad | Project Management Consultants (PMC) Resident Engineer (RE) | Project Management Consultants (PMC) Resident Engineer (RE) | Project Management Consultants (PMC) Resident Engineer (RE) | Project Management Consultants (PMC) Resident Engineer (RE) |
| 20/12/2019 | 20/12/2019 | 20/12/2019 | 20/12/2019 | 20/12/2019 |

Sindh Provincial Road Improvement Project
Package 07 LOT-3 (Cantt. Adjacent to Chakkar Road, Sindh)

Quarterly Environmental Effects Monitoring Report of Lot-2, Sehwan-Dadu-32 km



Sustainable Environmental Services | **SES**

Analysis Report

Report # SES/ENV/Dec/19/00235/45-C

Date: 1 Jan 2020

| Description | | | | | |
|--------------------|------------------------------------|----------------------|---|----------|-------------|
| Quantity of sample | 1.0 Liter | Sampling Methodology | Grab | Job Date | 26 Dec 2019 |
| Analysis Type | Chemical Analysis | Sampling Location | Camp Site | | |
| Coordinate | 26° 31' 21.2" N 67° 51' 21.3" E | RD | 10+200 Km | | |
| Client | M/s JSHT-NCC-SB (Joint Venture) JV | Address | Nemat Allah House Khamisho Khan Buladi Care Colony Near Govt High School Sehwan | | |

Drinking Water Test Report

| S # | Parameters | Units | Testing Method | SEQS Limits | Result | Remarks |
|-----|-------------------------|--------------------------|--|-------------------------|-------------------|---------|
| 01 | Total Bacteria Count | TBC (count/ml) | Total Viable Count | ----- | 12 | WL |
| 02 | Total Coliform | TC (count/ml) | APHA 922 B | 0/100 ml | Nil | WL |
| 03 | E-Coli | E col(count/ml) | Total Viable Count | 0/100 ml | Nil | WL |
| 04 | Facial Coli | F C (count/ml) | APHA 922 B | 0/100 ml | Nil | WL |
| 05 | pH @ 25 °C | pH | ASTM D-1293 | 6.5 to 8.5 | 8.10 | WL |
| 06 | Taste | Taste | Sensory Evolution | Objection/Non Objection | Non-Objectionable | WL |
| 07 | Odour | Odor | Sensory Evolution | Objection/Non Objection | Non-Objectionable | WL |
| 08 | Colour | TCU | Pt-Co Method | <15 TCU | <5 | WL |
| 09 | Total Dissolved Solid | TDS (mg/L) | APHA 2540-C | <1000 | 185 | WL |
| 10 | Fluoride | F (mg/L) | Lovibond Spends Regent Method | 1.5 | 0.11 | WL |
| 11 | Chloride | Cl (mg/L) | ASTM D-512 | 2500 | 98.7 | WL |
| 12 | Turbidity | NTU | Lovibond Attenuated Radiation Method | <5 | BDL | WL |
| 13 | Total Hardness as CaCO3 | T.Hard (mg/L) | ASTM D-1126 | ----- | BDL | WL |
| 14 | Nitrate | NO3(mg/L) | LovibondChromotropic Acid | 50 | 0.56 | WL |
| 15 | Nitrite | NO2 (mg/L) | Lovibond N-(1 Naphthyl)-ethylenediamine Method | 3 | 0.08 | WL |
| 16 | Chromium | Cr ⁶⁺ (mg/L) | Lovibond 1,5 diphenyl-Carbohydrazide Method | ----- | ND | WL |
| 17 | Copper | Cu ²⁺ (mg/L) | LovibondBiquinoline Method | 2 | <0.01 | WL |
| 18 | Manganese | Mn (mg/L) | Lovibond PAN Method | 0.5 | ND | WL |
| 19 | Boron | B (mg/L) | LovibondAzomethine Method | 0.3 | ND | WL |
| 20 | Aluminum | Al ³⁺ (mg/L) | ASTM D- 857 | 0.2 | 0.002 | WL |
| 21 | Nickel | Ni (mg/L) | LovibondDimethylglyoxime Method | 0.02 | ND | WL |
| 22 | Selenium | Se ²⁻ (mg/L) | APHA 4500 sb | 0.01 | ND | WL |
| 23 | Residual chlorine | Cl ₂ (mg/L) | Lovibond DPD | ----- | ND | WL |
| 24 | Antimony | Sb (mg/L) | APHA 3111 -sb | 0.02 | ND | WL |
| 25 | Barium | Bar ²⁺ (mg/L) | ASTM D-3651 | 0.7 | 0.001 | WL |
| 26 | Cadmium | Cd ²⁺ (mg/L) | ASTM D- 3557 | 0.003 | ND | WL |
| 27 | Cyanide | CN (mg/L) | APHA 4500 CN | 0.07 | ND | WL |
| 28 | Mercury | Hg ²⁺ | Kt Method | 0.001 | ND | WL |
| 29 | Lead | Pb ²⁺ (mg/L) | ASTM D- 3559 | 0.01 | ND | WL |
| 30 | Phenolic Compounds | Phol (mg/L) | ASTM D- 1783 | 0.02 | <0.01 | WL |
| 31 | Arsenic | As (mg/L) | Merck Kt Method | 0.01 | ND | WL |
| 32 | Zinc | Zn ²⁺ (mg/L) | LovibondZincron Method | 3 | 0.04 | WL |



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