

Environmental Monitoring Report

April 2021

Period Covering: Jul-Dec 2020

Pakistan: Second Power Transmission Enhancement Investment Program, Tranche 1

Prepared by National Transmission and Despatch Company (NTDC) 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 "\$" refer to US dollars.

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Environmental Monitoring Report

Semestral Report
March 2021

PAK: Second Power Transmission Enhancement Investment Program Tranche 1

Prepared by AF Mercados Aries EMI (Facility Management Cell) for National Transmission & Despatch Company Limited and the Asian Development Bank.

CURRENCY EQUIVALENTS

(as of 28 March 2021)

Currency unit	–	Pakistani rupees (PKR)
PKR 1.00	=	\$0.0065
\$1.00	=	PKR 155

ABBREVIATIONS

ADB	Asian Development Bank
CC	Construction Contractor
CPPA-G	Central Power Purchasing Agency Guaranteed
dBa	A-weighted Decibels
DC	Double Circuit
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	Environment Protection Agency
EPD	Environment Protection Department
ESIC	Environment and Social Impact Cell
FMC	Facility Management Consultant
GoP	Government of Pakistan
GRM	Grievance Redress Mechanism
GS	Grid Station
HSE	Health, Safety and Environment
HV	High Voltage
IEE	Initial Environmental Examination
LCC	Local Currency Components
MFF	Multi-tranche Financing Facility
NOC	No Objection Certificate
NOL	No Objection Letter
NTDC	National Transmission and Despatch Company
OHS	Occupational Health and Safety
OFGW	Optical Fiber Ground Wire
PAK	Pakistan
PEPA	Punjab Environmental Protection Act
PEQS	Punjab Environmental Quality Standards
PMU	Project Management Unit
PPE	Personal Protective Equipment

PTEIP	Power Transmission Enhancement Investment Program
RoW	Right of Way
SEMR	Semestral Environmental Monitoring Report
SC	Single Circuit
SCDA	Supervisory Control and Data Acquisition
SSEMP	Site-Specific EMP
TBT	Toolbox Talk
TL	Transmission Line
UST	Underground Storage Tank
WAPDA	Water & Power Development Authority

WEIGHTS AND MEASURES

mg/Nm ³	mg per normal meter cube
MW	Megawatt
mg/l	Milligram per liter
kg	kilogram
kV	kilovolt
m/s	meters per second
mg/kg	milligram per kilogram
mg/Nm ³	milligram per normal cubic meter
km	kilometers
m	meter
°C	Degree Celsius
µg/m ³	Microgram per cubic meter

GLOSSARY

EIA	Environmental Impact assessment is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural, and human-health impacts, both beneficial and adverse.
IEE	Initial Environmental Examination a preliminary small study to see project impacts, both beneficial and adverse to the environment while the EIA is a full assessment of the effects.
NOC	No Objection Certificate is the clearance or certificate given by the authority (EPA) for the specific project after evaluation of IEE/EIA. NOC is granted with or without conditions.
EMP	Environmental Management Plan can be defined as an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced.

SSEMP Site-specific Environmental Management Plan is applied to the actual site where construction activities will occur.

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Table of Contents

1. Introduction	1-1
1.1 Preamble	1-1
1.2 Headline Information.....	1-1
2. Project Description and Current Activities	2-1
2.1 Project Description	2-1
2.2 Project Contracts and Management	2-4
2.3 Project Activities During the Current Reporting Period	2-6
2.4 Description of any Changes to Project Design	2-8
2.5 Description of any Changes to Agreed Construction Methods.....	2-8
3. Environmental Safeguard Activities	3-1
3.1 General Description of Environmental Safeguard Activities	3-1
3.2 Site Audits.....	3-1
3.3 Issues Tracking (Based on Non-Conformance Notices)	3-2
3.4 Trends	3-2
3.5 Unanticipated Environmental Impacts or Risks.....	3-3
4. Results of environmental monitoring	4-1
4.1 Overview of Monitoring Conducted during the Current Period	4-1
4.2 Trends	4-2
4.2.1 Ambient Sound Levels	4-3
4.3 Summary of Monitoring Outcomes	4-4
4.4 Material Resources Utilization	4-4
4.4.1 Current Period.....	4-4
4.4.2 Cumulative Resource Utilization	4-4
4.5 Waste Management.....	4-4
4.5.1 Current Period.....	4-4
4.5.2 Cumulative Waste Generation	4-4
4.6 Health and Safety	4-5
4.5.3 Community Health and Safety	4-5
4.5.4 Worker Safety and Health.....	4-5
4.6 Training	4-5
5. Functioning of the SSEMP.....	5-1
6. Good Practice and Opportunity for Improvement	6-1
6.1 Good Practice	6-1

6.2 Opportunities for Improvement	6-1
7. Summary and Recommendations	7-1
7.1 Summary	7-1
7.2 Recommendations	7-1

Annexure:

Annexure I: ESIC's Environmental Safeguards Initiatives and Records

Annexure II: Construction Contractor's Provided Environmental Monitoring Reports

Annexure III: Recorded Non-Compliances and Corrective Actions

Figures

Figure 2.1:	Project Location	2-3
Figure 2.2:	Organization of PMU	2-4
Figure 2.3:	Organization of FMC	2-5
Figure 3.1:	Issues Tracking and Trend	3-3
Figure 4.1:	Trend of Air Quality Results	4-3
Figure 4.2:	Trend of Ambient Sound Levels	4-4

Tables

Table 2.1:	FMC's Environment Safeguards Team.....	2-6
Table 2.2:	Under-construction Projects and Construction Contractor	2-6
Table 2.3:	Loan No. 3419, Tranche 1 Status of Subprojects	2-7
Table 3.1:	Summary of Environmental Audit Findings.....	3-1
Table 3.2:	Summary of Noncompliance on Tranche 1 Subprojects.....	3-2
Table 4.1:	Results of Ambient Air Quality.....	4-2
Table 4.2:	Results of Ambient Sound Levels	4-3

1. Introduction

1.1 Preamble

1. This report represents the semestral environmental monitoring report for Second Power Transmission Enhancement Investment Program (PTEIP), Multi-tranche Financing Facility (MFF-II) – Tranche 1, Project Number 48078 (the project).
2. The report is the 6th Semestral Environmental Monitoring Report (SEMR) for the project.

1.2 Headline Information

3. A summary of significant outcomes of this SEMR and specific areas of concern on which ADB should be informed is provided hereunder:
4. This report addresses findings of environmental monitoring and status of regulatory compliance of subprojects ADB-100, ADB-106 (Lot-I), ADB-108 (Lot-I & Lot-II), ADB-105 (Lot-I) and ADB-105 (Lot-II) of Tranche 1 between the period of July 1, 2020, to December 31, 2020.
5. All above subprojects are completed and commissioned except ADB-105 (Lot-II) which is in the bidding process and the bidding document has been sent to ADB for approval.
6. The non-compliances identified as pending in precursor SEMR at these projects are either closed by the contractor or become insignificant with the completion of the projects such as the lack of environmental monitoring at construction sites.

2. Project Description and Current Activities

2.1 Project Description

7. National Transmission & Despatch Company (NTDC) Limited was incorporated on 6th November 1998 and took over all the properties, rights, and assets as well as the obligations and liabilities of the 220 kV and 500 kV Grid Stations and Transmission Lines/Network owned by Pakistan Water and Power Development Authority (WAPDA)¹.

8. The Government of Pakistan (GoP) signed a loan agreement with the Asian Development Bank (ADB) for financial support under the multi-tranche financing facility for the construction of the Power Enhancement Projects in Pakistan.

9. The multi-tranche financing facility for the Second Power Transmission Enhancement Investment Program (MFF II) will expand and reinforce Pakistan's power transmission system, enabling the system to provide a reliable and quality service capable of meeting increasing customer demand and supporting economic growth. The physical investments will increase transmission capacity to meet growing demand, improve transmission efficiency and security, and evacuate additional sources of power. The capacity development component will focus on further improving the financial management, regulatory relations, planning, project management, and procurement capacities of both the transmission system owner and operator, the NTDC, and the sector's newly established commercial operator, the Central Power Purchasing Agency (Guarantee) Limited (CPPA-G). These investments will increase institutional efficiency, cost recovery, competition, transparency, and good governance within the sector.

10. The MFF II comprises of four tranches. Tranche 1 focuses on the rehabilitation and augmentation of 500-kilovolt (kV) transmission systems in Punjab and Sindh provinces. Through its concessional loan from the Asian Development Bank, Tranche 1 provides capacity development to support the NTDC's organizational restructuring and to enhance its capacity to plan, design, operate, and manage assets throughout the second MFF. Tranche 2 will expand the 220 kV transmission systems in the provinces of Sindh and Baluchistan. It will also upgrade the supervisory control

¹ <http://www.ntdc.com.pk>

and data acquisition system across the national grid to enable the NTDC to monitor and control the grid in real-time, and to prevent network outages or reduce their duration, thereby increasing grid stability, reliability, and resilience to accommodate more intermittent renewable energy. Tranche 3 will expand the 500 kV and 220 kV transmission systems to meet demand at load centers in Punjab Province. Tranche 4 will help evacuate hydropower to load centers in Islamabad and the provinces of Punjab and Khyber Pakhtunkhwa.

11. The overall objective of the project is to increase the power transmission capacity, efficiency, and coverage in Pakistan. It is also meant to increase the confidence of commercial financiers in financing long-term transmission and distribution assets in Pakistan.

12. The specific objectives are:

- Improvement in transmission infrastructure and management.
- Improvement in Energy Market Transparency and efficiency.

13. MFF comprises projects located in different areas of the country, as can be seen in **Figure 2.1**.

14. The purpose of this report is to review the monitoring approach of the construction contractor and implementing agency and assess the compliance with ADB environment safeguards requirements and see if the construction activities are being carried out as per the conditions of environmental approval or No-Objection Certificate (NOC) and the requirements of initial environmental examination (IEE) and environmental impact assessment (EIA) by satisfying the provincial and national environmental regulatory requirements of Pakistan.

15. Monitoring is being carried out during the construction period to assess the environmental impact of construction, the environmental quality in the proposed project areas, as well as the implementation of environmental protection measures.

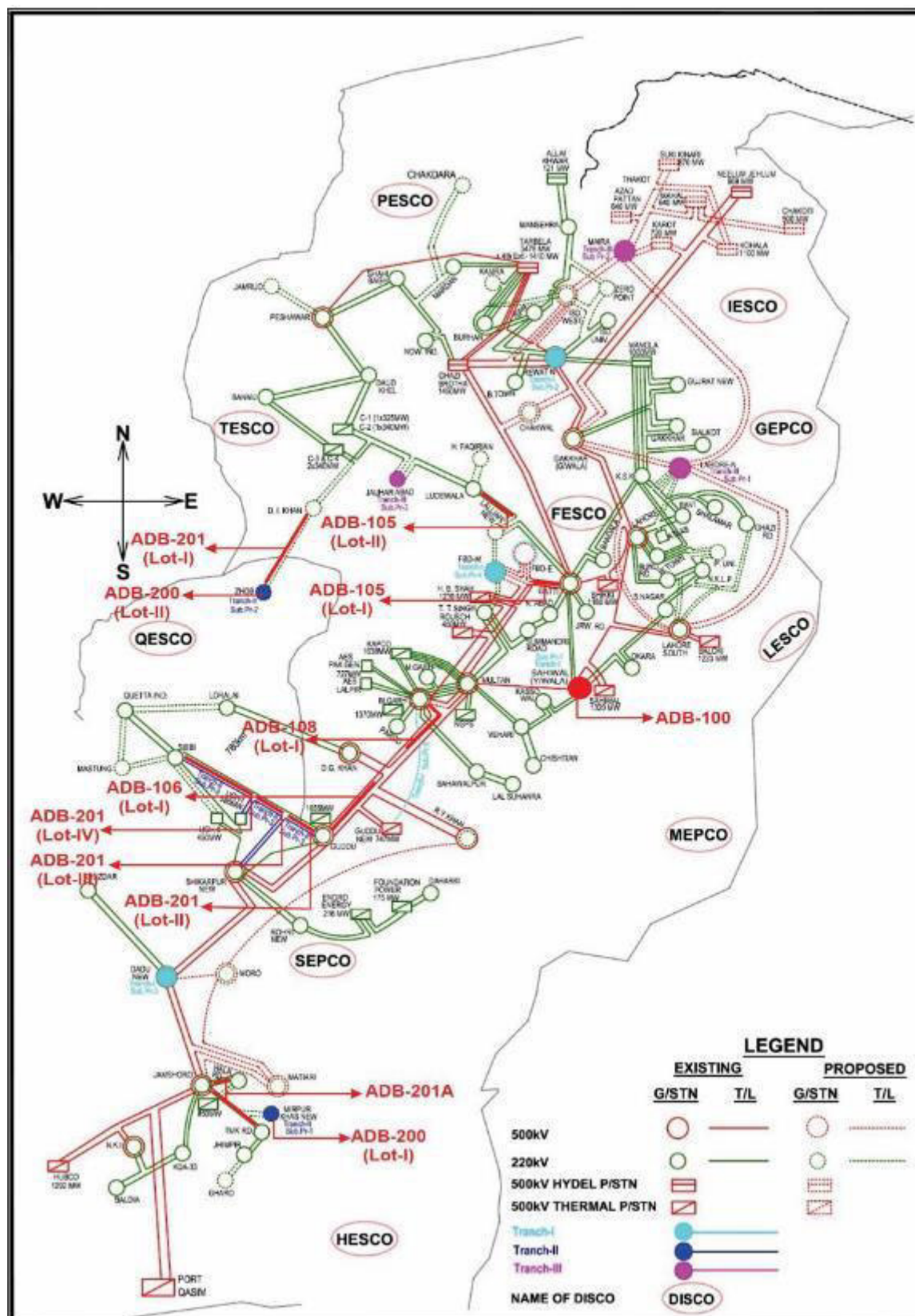


Figure 2.1: Project Location

2.2 Project Contracts and Management

16. NTDC has established a Project Management Unit (PMU) to manage the implementation of current tranches and the preparation and implementation of future tranches. The PMU is headed by the Chief Engineer, PMU, and responsible for day-to-day project implementation for the physical outputs relating to the transmission system and operation (as defined under their transmission license) under each tranche. The facility management consultant (FMC) supports the PMU in project implementation of Tranche 1, Tranche 2, and Tranche 3 including social and environmental safeguards implementation.

17. PMU is responsible for complying with the safeguard's requirements and design and monitoring framework and loan covenants.

18. The organization of PMU is shown in **Figure 2.2**. FMC organization is shown in **Figure 2.3**.

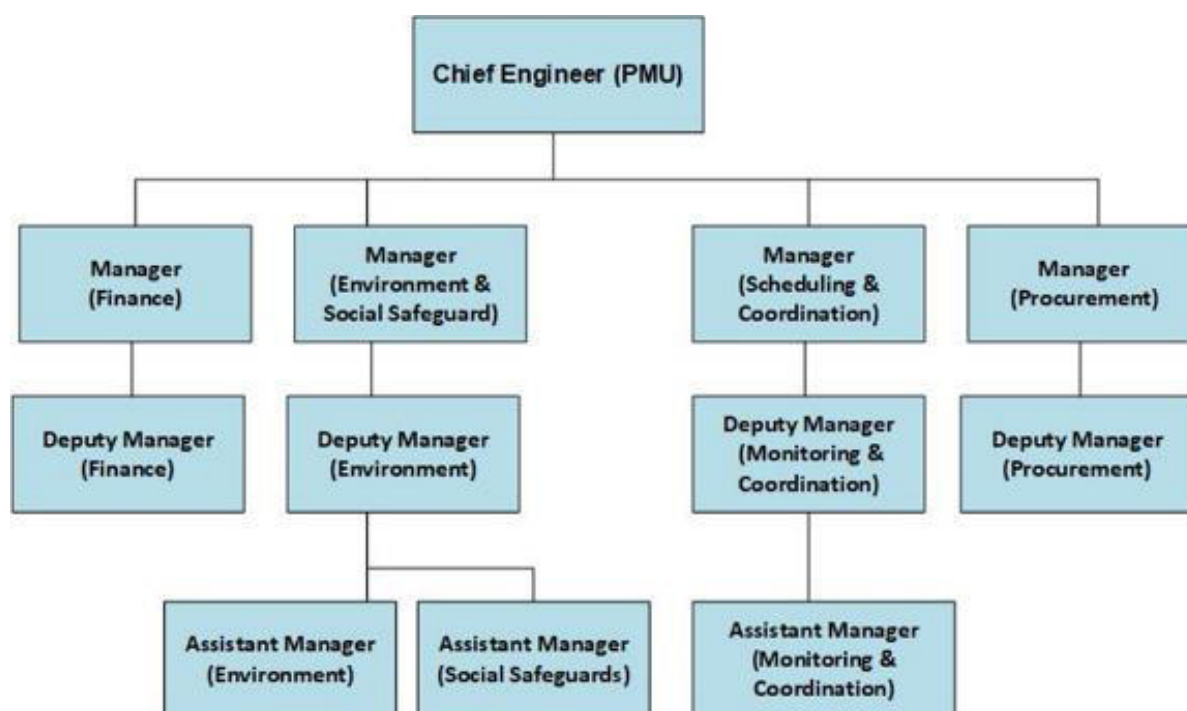


Figure 2.2: Organization of PMU

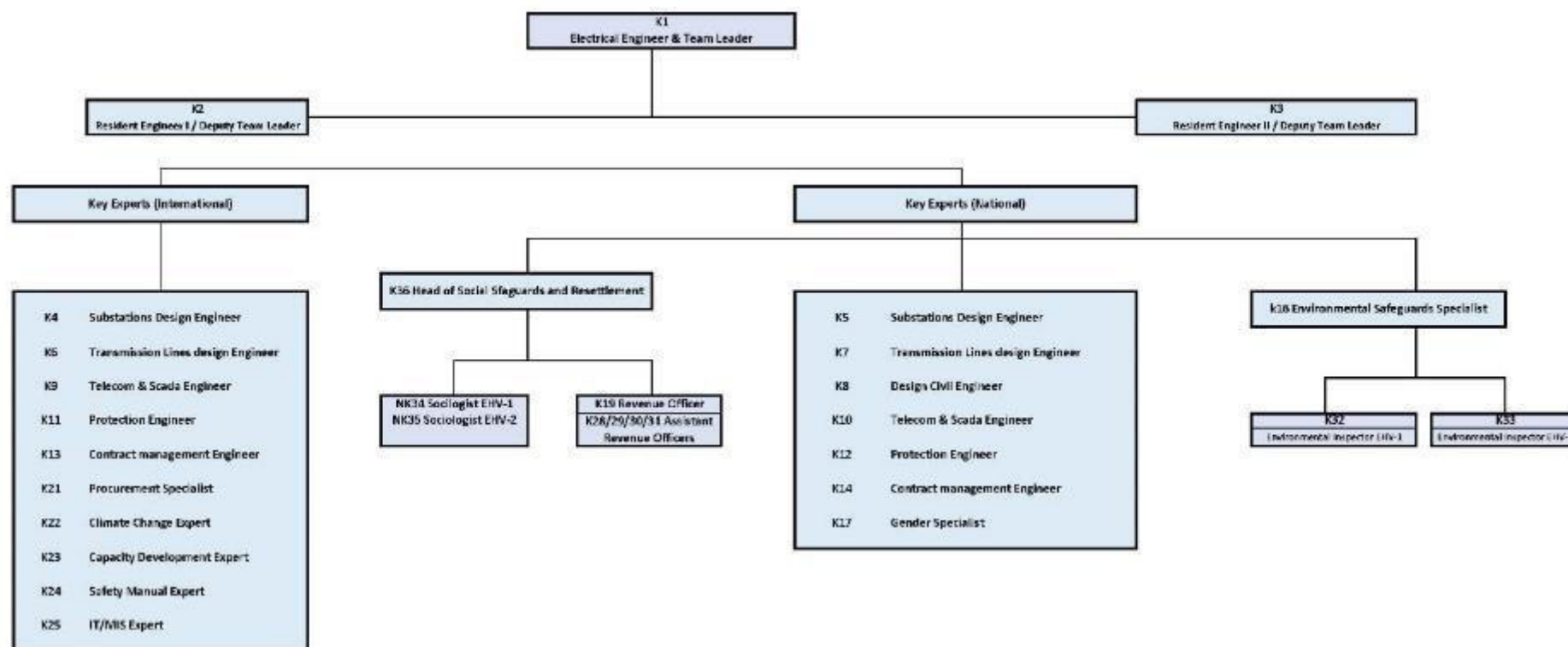


Figure 2.3: Organization of FMC

19. The names and contact details of FMC's environmental team members including Environmental Safeguards Specialist and Environmental Inspectors are provided in **Table 2.1**.

Table 2.1: FMC's Environment Safeguards Team

No	Name	Designation	Contact Details
1	Aziz Karim	National Environmental Safeguards Specialist	Landline: +9251 2857200-6 Cell: +92345 502 9000 Email: akarim@haglerbailly.com.pk
2	Muhammad Wajahat Saeed	Environmental Inspector (EHV-1)	Landline: +9251 2857200-6 Cell: +92300 506 2509 Email: mwajahat@haglerbailly.com.pk
3	Muhammad Maqsoom	Environmental Inspector (EHV-2)	Landline: +9251 2857200-6 Cell: +92347 152 2377 Email: mmaqsoom@haglerbailly.com.pk

2.3 Project Activities During the Current Reporting Period

20. Tranche 1 subprojects include the construction of new transmission lines, extension and augmentation of existing substations, and installation of shunt reactor, and replacement of protection equipment at 11 grid stations.

21. **Table 2.2** provides contact information of the relevant staff of the Construction Contractor (CC) for projects covered in this SEMR.

22. The status of the subprojects under Tranche 1 is summarized in **Table 2.3**.

Table 2.2: Under-construction Projects and Construction Contractor

No	ADB Contract No.	Tranche	ADB Contract Name	Contact Details
1	ADB-100	Tranche 1	Procurement of plant, design, supply, installation, testing & commissioning of 500/220kV autotransformer bay at 500kV Sahiwal substation	Contractor: Siemens Pakistan Sub-contractor: NETRACON Technologies Construction Manager: Tahir Ali (+92 303 020 3679) EHS Engineer: M Yasir (+92 320 961 4061)
2	ADB-105 (Lot-I)	Tranche 1	500 kV Faisalabad West (Phase II): 500 kV D/C T/L in/out of 500 kV Multan – Gatti at 500 kV Faisalabad West (30 km)	Contractor: NETRACON - SEPCC/CWTWC JV Construction Manager: Engr. Waseem Iqbal (+92 342 218 1984)

No	ADB Contract No.	Tranche	ADB Contract Name	Contact Details
				EHS Manager: Akasha (+92 323 749 8954)
3	ADB-106 Lot-I	Tranche 1	Civil works, erection, testing & commissioning of 500kV transmission line Guddu - Muzaffargarh (74KM) from Location No.1 – 199	Contractor: NEIE-AHT JV Construction Manager: Mr. Zafar Shah (+92 313 144 0111) HSE Engineer: Mr. Azam Bhatti (+92 334 201 9102)
4	ADB-108 Lot-I	Tranche 1	500 kV S/C T/L Guddu - Muzaffargarh from Location No. 597 to Location No. 664 (22.7km).	Contractor: NPCC JV HSE Engineer: Mr. Iftikhar Ali (+92 301 387 3556)
5	ADB-108 Lot-II	Tranche 1	500 kV D/C T/L In-Out of DG Khan, Multan T/L (7.6+7.6 km) and Interfacing of 500 kV circuit at Muzaffargarh	Contractor: NPCC JV HSE Engineer: Mr. Iftikhar Ali (+92 301 387 3556)

Table 2.3: Loan No. 3419, Tranche 1 Status of Subprojects

Loan No. 3419 Tranche 1 Subprojects Status

Date: July 2020

No	Contract No.	Estimated project cost US \$ in Million	Description	Status
1	ADB-100	10.57	Procurement of plant, Design, supply, installation, testing & commissioning of 500/220kV autotransformer bay at 500kV Sahiwal substation	• Completed and Commissioned
2	ADB-101	4.2	Addition of 1x250 MVA, 220/132kV Auto Transformer at 550kV Rewet Substation & supply of one no. 250 MVA, 220/132 kV Autotransformer.	• Bids Scrapped
2a	ADB-101A	4.2	Procurement of 4 Nos. 220/132kV, 250 MVA autotransformers	• Bids Scrapped
3	ADB-102	1.962	Procurement of plant, design, supply, installation, testing & commissioning of 22 MVAR shunt reactor at 500kV Substation Dadu.	• Completed and Commissioned
4	ADB-103	2.542	Procurement of plant, Design, supply, installation, testing & commissioning of Protection relays, Fault recorders, Fault locators & Event recorders at 11Nos. Substations in the South area.	• Completed and Commissioned
5	ADB-105	15.63	500 kV Faisalabad West (Phase II) Lot-I: 500 kV D/C T/L in/out of 500 kV Multan – Gatti at 500 kV Faisalabad West (30 km)	• Completed and Commissioned
			Lot-II: 220 kV D/C T/L Faisalabad West – Lalian (80 km)	• Draft Bidding document ADB -105R for Lot-II sent to ADB for approval.

No	Contract No.	Estimated project cost US \$ in Million	Description	Status
6	ADB-106 (Lot-I)	4.355	Civil works, erection, testing & commissioning of 500kV transmission line Guddu -Muzaffargarh (75KM)	• Completed and Commissioned
7	ADB-108 (Lot-I)	4.261	Lot-I: 500KV S/C T/L Guddu - Muzaffargarh from Location No. 597 to Location No. 664 (22.7Km)	• Completed and Commissioned
	ADB-108 (Lot-II)	2.5	Civil works, erection, testing & commissioning of 500KV S/C T/L (i) Lot-II: i) 500kV S/C T/L Guddu – Muzaffargarh from Location No. 664 to 725 (22km, approx.) and, (ii) (ii) 500 kV D/C T/L In-Out of DG Khan, Multan T/L (7.6+7.6 km) and Interfacing of 500 kV circuit at Muzaffargarh.	• Completed and Commissioned

2.4 Description of any Changes to Project Design

23. No changes.

2.5 Description of any Changes to Agreed Construction Methods

24. No changes.

3. Environmental Safeguard Activities

3.1 General Description of Environmental Safeguard Activities

25. FMC's Environmental Team (ET) has conducted environmental compliance visits at recently completed Tranche 1 subprojects. The audit visit details and findings are provided in **Table 3.1**.

3.2 Site Audits

26. FMC's Environmental Team (ET) has conducted environmental compliance audits at Tranche 1 subprojects, which are recently completed including ADB-100 and ADB-105 (Lot-I).

27. The audit visit details and findings are provided in **Table 3.1**.

Table 3.1: Summary of Environmental Audit Findings

	ADB-100	ADB-105 (Lot-I)
Name of Auditors	Muhammad Maqsoom, FMC's Environmental Inspector	Muhammad Maqsoom, FMC's Environmental Inspector
Purpose of Audit	Compliance check	Compliance check
Summary of any Significant Findings	<ul style="list-style-type: none"> • All the past non-conformances were found addressed or closed. • The subproject has been commissioned and the workforce has been demobilized from the worksites and camps. • Housekeeping condition was found adequate i.e. No unattended leftovers recorded. • See Annexure-III for more details. 	<ul style="list-style-type: none"> • Nine out of 10 past non-conformances were found addressed or closed on ADB-105 (Lot-I). • The subproject has been commissioned and the workforce has been demobilized from the worksites and camps. • NTDC has issued deemed approval letter after no response from Punjab EPA to reminder letters on approval. • The construction contractor has left behind the building structures such as toilets, sewerage disposal pit with solid waste, construction materials at the warehouse. • These utilities will be used by another contractor employed by NTDC for a substation construction at the same site. • See Annexure-III for more details.

	ADB-100	ADB-105 (Lot-I)
Environmental Monitoring Report	<ul style="list-style-type: none"> The contractor has provided environmental monitoring reports. The values measured are within PEQS for noise and drinking water. All parameters for ambient air were within the PEQS except PM_{2.5} See Annexure II 	<ul style="list-style-type: none"> Environmental monitoring evidence was not provided This requirement has been dissolved with the completion and commissioning of the subproject.

3.3 Issues Tracking (Based on Non-Conformance Notices)

28. The non-conformances recorded at ADB-105 (Lot-I) during previous SEMR, non-compliances/ issues have been addressed or became irrelevant after completion of the construction.

29. NTDCs has issued deemed approval letter after no response from Punjab EPA to reminder letters on approval.

30. Three new non-compliances were also noticed during the recent visit to the ADB-105 (Lot-I). These are related to the rehabilitation of construction camps.

31. The construction contractor has left behind the building structures such as toilets, sewerage disposal pit, and construction materials at the warehouse site of the subproject ADB-105 (Lot-I). These utilities and material will be used by another contractor employed by NTDC for a substation construction at the same site.

32. The non-conformances recorded at ADB-100 during previous SEMR, all issues were addressed or became irrelevant after completion of the construction.

3.4 Trends

33. **Table 3.2** provides a summary of the current status of non-compliances. The table also provides information on pending issues from previous SEMR and new issues from the current visit. The complete details are provided in **Annexure III**.

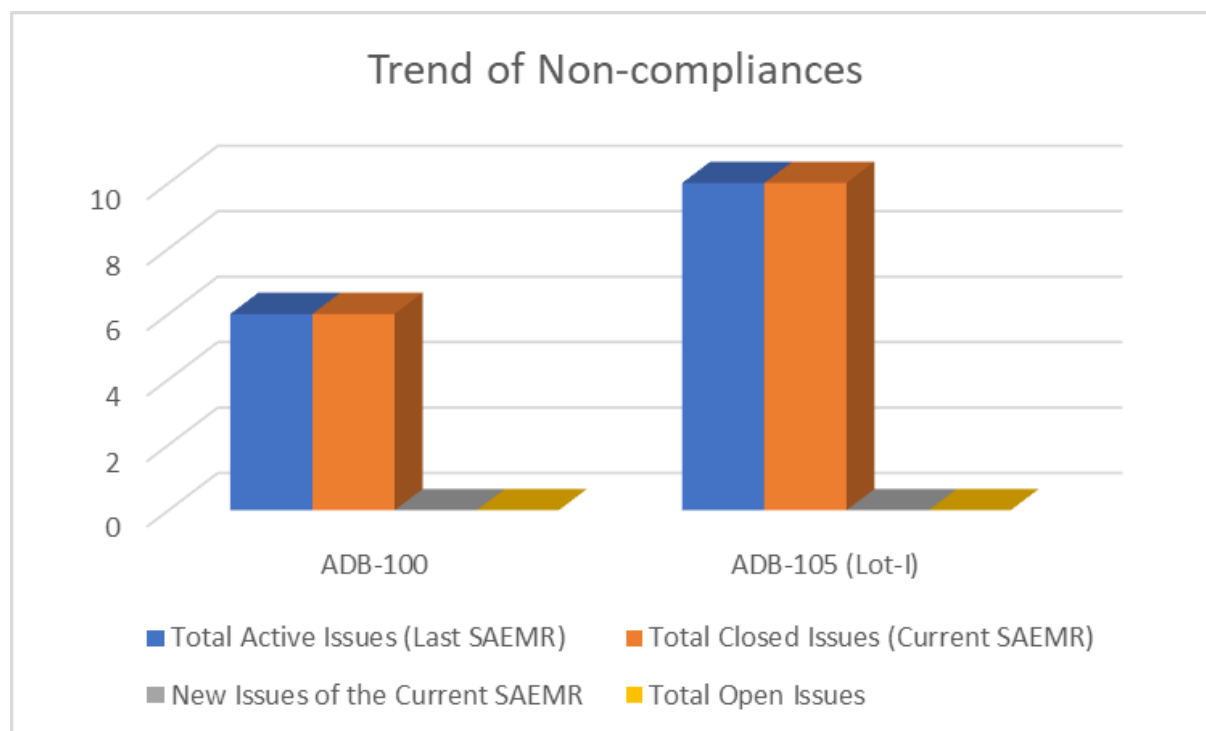
34. **Figure 3.1** shows the graphical trend of the current status of non-compliances with the precursor SEMR.

Table 3.2: Summary of Noncompliance on Tranche 1 Subprojects

<i>Issues Status</i>	<i>ADB-100</i>	<i>ADB-105 (Lot-I)</i>
Total Active Issues (Last SEMR)	6	10
Closed Issues (Current SEMR)	6	10

Issues Status	ADB-100	ADB-105 (Lot-I)
New Issues of the Current SEMR	0	0
Total Open Issues	0	0

Figure 3.1: Issues Tracking and Trend



3.5 Unanticipated Environmental Impacts or Risks

35. Not found.

4. Results of environmental monitoring

4.1 Overview of Monitoring Conducted during the Current Period

ADB-106 (Lot-I)

36. The construction work has been completed at subproject ADB-106 (Lot-I) and the subproject has been commissioned. The status of the environmental monitoring at the subproject was reported in past SEMRs.

ADB-108 (Lot-I & Lot-II)

37. The construction work has been completed at subproject ADB-108 (Lot-I and Lot-II) and the subproject has been commissioned. The status of the environmental monitoring at the subproject was reported in past SEMRs.

ADB-105 (Lot-I)

38. The construction work has been completed and the subproject has been commissioned.

39. The CC of ADB-105 (Lot-I) did not submit any environmental monitoring reports to Environmental and Social Impact Cell (ESIC). This requirement is now dissolved after the completion and commissioning of the subproject.

40. For filling the gap above, ESIC with support from FMC has conducted environmental monitoring at ADB-105 (Lot-I) on the project from October 3 to October 6, 2019. The parameters measured included CO, NO₂, NO, SO₂, PM₁₀, and PM_{2.5}.

41. The findings of the monitoring were discussed in the previous SEMR (July 2019 to December 2019), submitted in January 2020.

ADB-100

42. The CC of ADB-100 is conducting environmental monitoring at construction sites regularly and reports to ESIC of NTDC.

43. The monitoring report prepared by the CC for June 2020 for subproject ADB-100 is included in **Annexure II**.

4.2 Trends

44. The trend observed from CC's monitoring reports of ADB-100 provided in this SEMR and past SEMR is presented below for air quality and sound levels based on laboratory provided results.

45. The analysis results for establishing trends are taken from monitoring reports of July 2019, December 2019, and July 2020.

Ambient Air quality

46. **Table 4.1** provides the measurement results of July 2019, December 2019, and July 2020 at ADB-100.

47. **Figure 4.1** shows a comparison of previous (July 2019 and December 2019) and present (July 2020) results.

48. There is no noticeable change in monitoring results other than PM_{2.5} and PM₁₀ which are found to be less during the present monitoring.

Table 4.1: Results of Ambient Air Quality

Parameters	Unit	Results		
		01-July-2019	30-Dec-2019	13-July-2020
CO	mg/m ³	0.85	1.13	1.09
NO	µg/m ³	21.38	21.73	21.06
NO ₂	µg/m ³	29.79	30.11	28.75
SO ₂	µg/m ³	19.0	19.21	19.43
PM _{2.5}	µg/m ³	60.0	55.0	30
PM ₁₀	µg/m ³	110.0	122.0	88

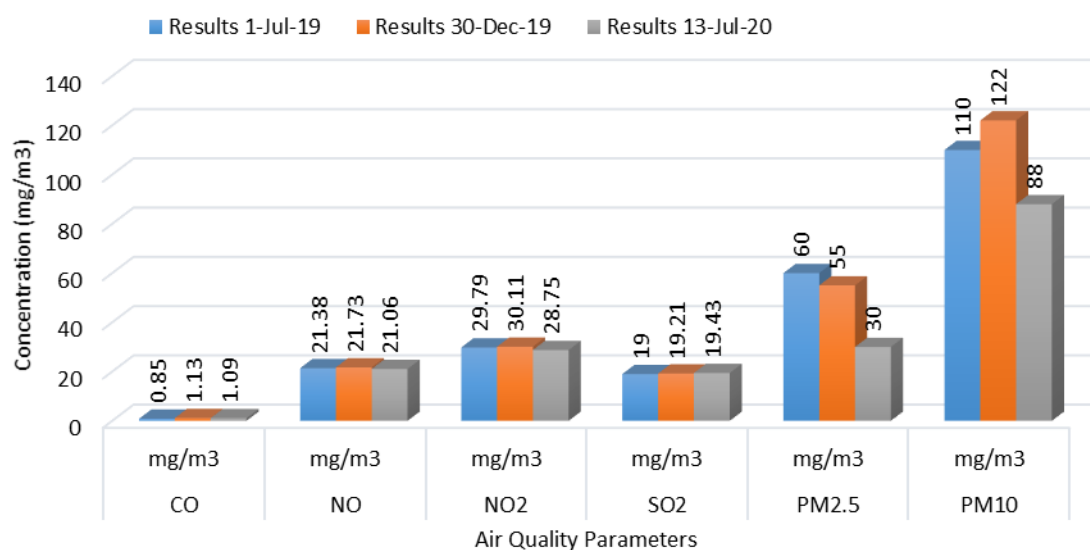


Figure 4.1: Trend of Air Quality Results

4.2.1 Ambient Sound Levels

49. **Table 4.2** provides the measurement results of July 2019, December 2019, and July 2020.

50. **Figure 4.2** shows a comparison of previous (July 2019 and December 2019) and present (July 2020) results.

51. The recently measured sound levels are reported slightly less than the previous monitoring, at all the locations at ADB-100.

Table 4.2: Results of Ambient Sound Levels

Location	Time	Results (dBA)		
		01-July-2019	30-Dec-2019	13-July-2020
Site Office	First	65.3	54.6	51.1
	Second	59.15	53.8	52.0
ATR Spare Foundation	First	66	57.65	56.3
	Second	60.15	59.8	57.2
Storage Area (132 kV Side)	First	57.6	55.8	52.6
	Second	54.0	57.7	52.9
1 st Gantry (500kV Yard)	First	59.85	59.3	54.3
	Second	56.15	51.7	53.6

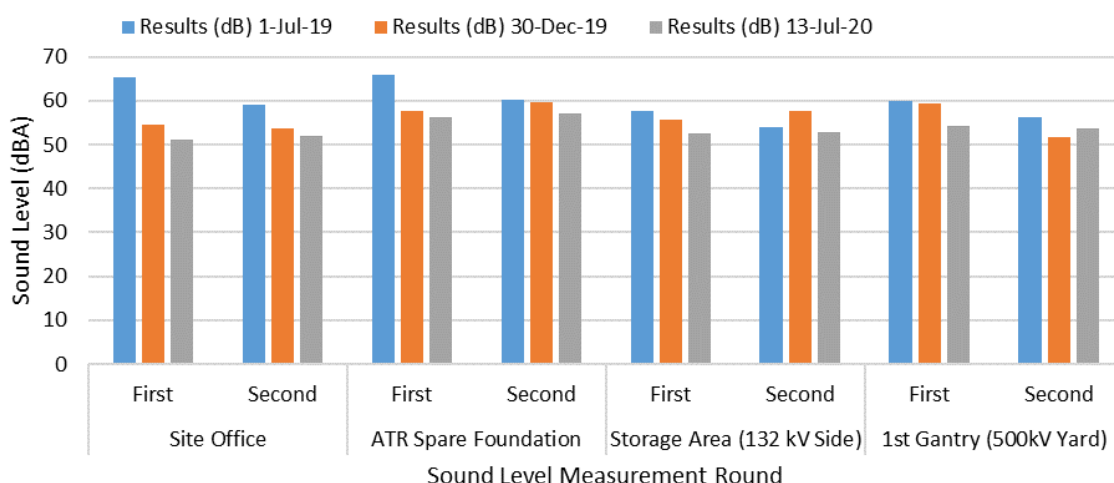


Figure 4.2: Trend of Ambient Sound Levels

4.3 Summary of Monitoring Outcomes

52. No data is available.

4.4 Material Resources Utilization

4.4.1 Current Period

53. No data is available.

4.4.2 Cumulative Resource Utilization

54. No past data is available for these projects for estimating cumulative resource utilization.

4.5 Waste Management

55. The ongoing subprojects under Tranche 1 including ADB 100, ADB-105 (Lot-1), ADB-106 and ADB-108 (Lot I and Lot-II) are completed and commissioned.

56. No records were maintained on solid or liquid waste generation at the above subprojects.

4.5.1 Current Period

57. Currently, no data is available on daily liquid and solid waste generation.

4.5.2 Cumulative Waste Generation

58. No past data is available for these projects for estimating cumulative waste generation.

1.2 Health and Safety

4.5.3 Community Health and Safety

59. No recordable incidents² occurred during the reporting period on ADB-100 and ADB-105 (Lot-I) subprojects that resulted in or could have resulted in Community Health and Safety issues.

4.5.4 Worker Safety and Health

60. There was no mechanism with the contractors for a record of near misses or incidents.

4.6 Training

61. No data was available with the CC. However, ESIC with the support of FMC conducted several training sessions and sensitized the CC about ADB policies and environmental issues.

² OSHA (Occupational Safety and Health Administration) defines a recordable incident is any work-related injury and illness that result in death, loss of consciousness, days away from work, restricted work activity, transfer to another job, or medical treatment beyond first aid.

5. Functioning of the SSEMP

62. The construction work has been completed at all the subprojects and the subprojects have been commissioned.

6. Good Practice and Opportunity for Improvement

6.1 Good Practice

63. The status of environmental safeguards at ADB-100 and ADB-105 (Lot-1) was observed to be satisfactory and required further improvements in areas discussed in **Section 7.1**.

64. Basic personal protective equipment (PPE) for all workers was available at ADB-100 and ADB-105 (Lot-I) based on the job requirement.

65. However, some of the important plans were lacking at both ADB-100 and ADB-105. These include an energy and water conservation plan, employee training, and refresher training plan, and a procedure for maintaining records. This requirement is now dissolved after the completion and commissioning of the subproject.

6.2 Opportunities for Improvement

66. No opportunities were observed except those discussed in **Section 7**.

7. Summary and Recommendations

7.1 Summary

67. Two ongoing or recently completed, ADB-funded subprojects from 2nd Power Transmission Enhancement Investment Program Tranche 1 were evaluated during the current reporting period including ADB-100 and ADB-105 (Lot-I).

68. A follow-up visit was made to verify if the past environmental issues raised in the precursor SEMR have been closed.

69. A monthly environmental monitoring report of the construction activities was produced at ADB-100 by the CC but this requirement is lacking at ADB-105 (Lot-I) although the same contractor is executing the construction work.

70. The CC of ADB-105 (Lot-I) argued that there were no budgetary provisions for the environmental monitoring tasks in the contract. However, this requirement is now dissolved after the completion and commissioning of the subproject.

71. At the warehouse of the ADB-105 (Lot-I), after completion and commissioning of the subproject, the CC has left behind the building structures such as toilets, sewerage disposal pit, and construction materials. These utilities and material will be used by another contractor employed by NTDC for a substation construction at the same site.

7.2 Recommendations

72. As a general practice, a copy of the approved latest SEMR should be shared with CC of all active ADB-funded projects so the CC is informed on the non-compliance and obligations to fulfill before the next SEMR.

73. There is no other recommendation as the subprojects under the tranche are completed and commissioned. However, for future projects, environmental monitoring requirements should be made part of bidding documents to provide CC enough resources to carry out environmental monitoring.

Annexue I: ESIC's Environmental Safeguards Initiatives and Records

1. Contractor's Document Record_ADB 100_ July 2020

Fortnightly EHS Report

SIEMENS

Toolbox Talk

Date: 29- 7-20
Location Assembly Point

Topic: Manual Handling

SR.No	Name	Company	Designation
1	Rizwan	Netracon	Forkman
2	ixfen	"	Pfr.1
3	Rizwan	"	"
4	Afzal	"	Pfr.2
5	Jeban	"	Labour
6	shekeel	"	Pfr.1
7	Ashraf gulzar	"	"
8	Ashraf yunus	"	"
9	Gulshan	"	Labour
10	Mukhtar	"	"
11	Kelash	"	Pfr.2
12	Afzal	"	Labour
13	Mukhtar	"	"
14	Yasir Masih	"	Pfr.2
15	Riaz	"	Labour
16	Shahid Javed	"	"
17	Albatt	"	"
18	Khair	"	"
19	Albatt Amin	"	"
20	Gulshan yunus	"	"
21	Mansha Khan	"	"
22	Nadeem	"	"

Siemens

Power Transmission and Distribution
High Voltage Substations

Daily Safety Report

Contract No:	Client: <i>NEL</i>
Project Name: <i>ADP 100 Extension</i>	Consultant: <i>Neltek & Associates</i>
Substation: <i>Sabinwal</i>	Contractor: <i>Siemens</i>
Month: <i>Jul 7</i>	Date: <i>20-7-2020</i>
Period: <i>8:15</i>	

Average taken during the duration:

Description	Average Man Power		Total
	Staff	Workman	
Contractor (Siemens)		1	1
Sub-contractor (Name) <i>Neltek</i>	-	-	-
Sub-contractor (Name) <i>Neltek</i>	-	-	-
Sub-contractor (Name) <i>Neltek</i>	6	231	237
Grand total	6	232	304
Working hours per day			

Accidents/Incident Statistics

Description	Today	Cumulative	Remarks
No. of Lost time accidents			
No. of Reportable LTAs			
No. of Days lost			
Safe Man hours worked	304	10,600	
Fire/Explosion Incidents			
First Aid Incidents			1
Occupational Illness			
Property damage			
Near miss			

Activities/Inspections today

Major Activities	Safety Precautions	Compliance	Remarks
<i>making trench cover</i>	<i>Drive Poles</i>	1	1
	<i>PPA</i>		

Safety Training/Toolbox talks (By Contractor Safety Engineer/Office or Third Party)

(Any third party training)

(Toolbox talk)

Conducted

Subject	Main Contractor	Sub-Contractor	Remarks
Induction training received today		1	
Induction trainings upto this day	1		

Safety Violation notices

	Today	Cumulative	Complied	Remarks
Received from Client/Consultant	1			
Issued to Sub-Contractor				

Safety Officer (Signature & Stamp)

Doc Ref No: SP17-ESRSC-003

Issue: 01/10/2017

(If reporting document is confirmed)

Page

Siemens Pakistan

Issued By 19

Date 22/07/20

ELECTRICAL WORK PERMIT

THIS WORK PERMIT IS REQUIRED FOR ALL WORKS THAT REQUIRE ISOLATION OF ELECTRICAL SERVICES. FOR ROUTINE DEVELOPMENTAL OR TESTING WORK ON ENERGIZED ELECTRICAL CIRCUITS, FOLLOW THE JOB SPECIFIC WORK INSTRUCTIONS

Description of work to be done: Transformer Connection with existing busbar
at 500KV yard.

Date 22/07/20 Time Start 8:00 Am Time Finish _____ Location / Site Sakinal

Work to be done by ☒ Contractor ☐ Siemans Responsible Task Supervisor Sanaullah

S.No	Item	Yes	No	Remarks	Signature
1	Has the survey of the site conducted and all precautions specific to the job identified?	✓			
2	All circuits connected to the equipment are earthed?	✓			
3	Barriers installed. Equipment "tagged". Danger / Warning signs installed?	✓			
4	Does this work has any impact on site services e.g. water supply, fire fighting system, building lighting etc & have the alternate arrangements made / notified for the emergency?		✓		
General Precautions					
5	Work area adequately barricaded & caution signs installed	✓			
6	Employees briefed on safety precautions.	✓			
7	Employees are trained in electrical works	✓			
8	Employees briefed on safety precautions.	✓			
9	Personal Protective Equipment (PPE) Provided <input checked="" type="checkbox"/> Safety Shoes <input checked="" type="checkbox"/> Safety Helmet <input type="checkbox"/> Safety Belt <input checked="" type="checkbox"/> Hand Gloves <input type="checkbox"/> Face shield <input type="checkbox"/> Respirator <input type="checkbox"/> Goggles <input type="checkbox"/> Dust Mask <input type="checkbox"/> Others	Other Safety considerations & Precautions specific to the job:			
Other specific PPE's required / provided pertinent to the job (e.g. in case of HT/LT lines, Natural Gas line etc.)					

I, Usman / Sufyan of the Field Supervisor

verify that the above location has been examined and all necessary precautions have been taken / ensured for the above mentioned work.

Field Supervisor's Sign: [Signature] Date 22/07/20

AUTHORIZATION:

Responsible Task Supervisor Name Sanaullah Sign [Signature] Date 22/07/20











Plant Safety Officer Name Sagib Sign _____ Date 22/07/20

PERMIT EXPIRES Date _____ Time _____ Sign _____
(Have Safety Officer to write)

JOB COMPLETION (To be filled by field supervisor after completion of job)

The work has been completed and the area has been left in safe condition.

Job completed at: Date _____ Time _____ Sign _____

JOB HAZARD ANALYSIS				Company Name:	
Prepared By:	Checked By:	Reviewed By:	Approved By: IEH/DOY		
				JHA #:	
Date:				Department:	
Job/Activity:	Jumper Connection with existing bus bar.			Duration of work:	
Worksite:	Salinas			How many people are involved in?	
Procedure / Work instruction available?				Equipment Used?	Hand tools
Supervised by:	Sanawit			What training / information is given?	T&I
Physical Hazards may include the following: e.g. Check the appropriate box for each hazard:					
  		Work at Height <input type="checkbox"/> Yes <input type="checkbox"/> No Falling Object <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Slip and Trip <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No High Noise / Light <input type="checkbox"/> Yes <input type="checkbox"/> No Fire / Explosion <input type="checkbox"/> Yes <input type="checkbox"/> No Moving Object <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electrical Shock <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Confined space work <input type="checkbox"/> Yes <input type="checkbox"/> No Welding / Cutting <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required: Mandatory PPE's.		Based upon the hazard assessment, the following PPE is required:
Chemical Hazards may include the following: applying paints in production working area, with fumes or dust Check the appropriate box for each hazard:					
 		Chemical Exposure <input type="checkbox"/> Yes <input type="checkbox"/> No Flammable / Explosive <input type="checkbox"/> Yes <input type="checkbox"/> No Reactive / Corrosive <input type="checkbox"/> Yes <input type="checkbox"/> No Toxic Gases / Fumes <input type="checkbox"/> Yes <input type="checkbox"/> No Dust / Air Particles <input type="checkbox"/> Yes <input type="checkbox"/> No Fumes / Vapors <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
Biological Hazards may include the following: infectious waste Check the appropriate box for each hazard:					
 		Infectious waste <input type="checkbox"/> Yes <input type="checkbox"/> No Contaminated surfaces <input type="checkbox"/> Yes <input type="checkbox"/> No Infection <input type="checkbox"/> Yes <input type="checkbox"/> No Contact with blood or body fluid <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
Ergonomic Hazards may include the following: May include work design, long sitting, room temperature, ventilation, repetitive work, poor lighting, etc. Check the appropriate box for each hazard:					
  		Noisy Work Environment <input type="checkbox"/> Yes <input type="checkbox"/> No Ventilation <input type="checkbox"/> Yes <input type="checkbox"/> No Vibration <input type="checkbox"/> Yes <input type="checkbox"/> No Poor Lighting <input type="checkbox"/> Yes <input type="checkbox"/> No Work Rest Cycle <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Unfavorable Climate Condition <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:

Daily Site Safety Inspection Sheet		
Location No. _____ Project Name: <u>ADB 100 Extension</u> Sub-station: <u>Sahung</u> Date (dd/mm/yyyy): <u>28-7-2020</u>		Client: <u>NLDC</u> Consultant: <u>Nestak + Parabb</u> Contractor: <u>Siemens</u> Sub-Contractor: <u>Nethalen</u>
1. Excavation Work permit issued & valid <input checked="" type="checkbox"/> Adequate access provided <input checked="" type="checkbox"/> Barricades & caution signs <input checked="" type="checkbox"/> Shoring / side struts provided <input checked="" type="checkbox"/> Soil stored clear of edge <input checked="" type="checkbox"/> Safety briefing given <input checked="" type="checkbox"/> PPE issued <input checked="" type="checkbox"/>	2. Work at height Work permit issued & valid <input checked="" type="checkbox"/> Scaffolds/working platform secure <input checked="" type="checkbox"/> Scaffolds/working platform tagged <input checked="" type="checkbox"/> Guard rails & toe boards provided <input checked="" type="checkbox"/> Ladders are secure <input checked="" type="checkbox"/> Safety briefing given <input checked="" type="checkbox"/> PPE provided <input checked="" type="checkbox"/>	3. Hot Works Work Permit issued & valid <input checked="" type="checkbox"/> Combustibles stored <input checked="" type="checkbox"/> Equipment clean <input checked="" type="checkbox"/> Barricades & caution signs <input checked="" type="checkbox"/> Openings covered <input checked="" type="checkbox"/> Safety briefing <input checked="" type="checkbox"/> PPE & FIT provided <input checked="" type="checkbox"/>
4. Confined Space Work permit issued & valid <input checked="" type="checkbox"/> Isocut free environment <input checked="" type="checkbox"/> Barricades & Caution signs <input checked="" type="checkbox"/> Ventilation & Lighting provided <input checked="" type="checkbox"/> Electrical supply disconnected <input checked="" type="checkbox"/> Safety briefing given <input checked="" type="checkbox"/> PPE issued <input checked="" type="checkbox"/>	5. Electrical Works Work permit issued & valid <input checked="" type="checkbox"/> Barricades and Caution signs <input checked="" type="checkbox"/> Equipment properly tagged <input checked="" type="checkbox"/> Electrical isolation enforced <input checked="" type="checkbox"/> Grounding / earthing proper <input checked="" type="checkbox"/> Safety briefing given <input checked="" type="checkbox"/> PPE issued <input checked="" type="checkbox"/>	6. Lifting Operations Lifting gear in good condition <input checked="" type="checkbox"/> Suitable for job <input checked="" type="checkbox"/> Banks man present <input checked="" type="checkbox"/> Barricades & caution signs <input checked="" type="checkbox"/> Adequate slinging <input checked="" type="checkbox"/> Loads correctly secured <input checked="" type="checkbox"/>
7. Welfare facilities Toilets are clean <input checked="" type="checkbox"/> Drinking water hygienic <input checked="" type="checkbox"/> Washing area clean <input checked="" type="checkbox"/> Shaded rest area provided <input checked="" type="checkbox"/> Rest area is clean <input checked="" type="checkbox"/> Clean mess area provided <input checked="" type="checkbox"/> Rest timings being observed <input checked="" type="checkbox"/>	8. Sub-station safety Adequate & clear access area <input checked="" type="checkbox"/> Perimeter fences intact <input checked="" type="checkbox"/> Emergency numbers displayed <input checked="" type="checkbox"/> Clear of leaks and spillage <input checked="" type="checkbox"/> No smoking enforced <input checked="" type="checkbox"/> FFE adequately provided <input checked="" type="checkbox"/> First Aid boxes adequate <input checked="" type="checkbox"/>	9. Sub-station safety Flammables correctly stored <input checked="" type="checkbox"/> Sockets in good condition <input checked="" type="checkbox"/> Extension wires undamaged <input checked="" type="checkbox"/> Storage area tidy <input checked="" type="checkbox"/> Storage area marked <input checked="" type="checkbox"/> PPE being enforced <input checked="" type="checkbox"/> Grind / cut fitted with guard <input checked="" type="checkbox"/>
10. House keeping Proper waste disposal <input checked="" type="checkbox"/> Garbage dumping area marked <input checked="" type="checkbox"/> Garbage area regularly cleared <input checked="" type="checkbox"/> Material storage area tidy <input checked="" type="checkbox"/> Timber denailed <input checked="" type="checkbox"/> Work area clean <input checked="" type="checkbox"/> Machines clean of oil & grease <input checked="" type="checkbox"/>	11. Toxic / Hazardous Substances Clearly marked <input checked="" type="checkbox"/> Properly stored <input checked="" type="checkbox"/>	12. General Work area clear of pests <input checked="" type="checkbox"/>
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 40%;"> Safety Officer (Signature & Stamp) Name: _____ </div> <div style="width: 60%; border-top: 1px solid black; height: 40px;"></div> </div> <p>Note: Please fill observation & Comments on page 2</p>		

Siemens (Pakistan) Engineering Co. Ltd. Serial No. 18
Date 21-7-2020

LIFTING WORK PERMIT

THIS LIFTING WORK PERMIT IS REQUIRED FOR ANY TEMPORARY OPERATION INVOLVING CRANE FOR LIFTING WORK (FOR LIFT >2 TON OR USE OF SIMULTANEOUS CRANES)

Description of the work to be done: Crane is used for lifting of wires for firing with existing.







Date: 21-7-2020 Time Start: 10:30 AM Time Finish: _____

Safe Working Load: 25 TON Crane Operator's Name: M. Ishaq Lifting Machine No: _____

Work to be done by: ☒ Contractor ☐ Siemens Responsible Task Supervisor: M. Sufyan

Please tick on the workplace or access by means of:
☐ Ladder Crane ☐ Rough Terrain Crane ☐ Truck Mounted Crane ☒ Mobile Crane

S No	Item	Yes	No	Remarks	Signature
1	Licensed crane operator	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2	Maintenance certificate of crane	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3	Have you fully assessed the type of load being lifted, its weight, its shape and what it consists of?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4	Have you assessed the risk of a load falling or striking a person, and its consequences?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5	Checks are conducted to ensure the lifting equipment is in good working order	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
6	Has the lifting equipment has been thoroughly examined by a competent person to ensure it is safe to operate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7	Are there suitable means of access to ingress from the lifting equipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
8	Are ambient conditions/environmental conditions suitable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
9	Is there a suitable means of escape in the event of a malfunction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
10	Are there power lines and if shutdown is required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Shut down 2x line</u>	
11	Two hand trigger and signman	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
12	Warning signs are displayed	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
13	Lifting area cordoned off	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
General Precautions					
14	Employees briefed on safety precautions (TBT Conducted)	<input type="checkbox"/>	<input type="checkbox"/>		
15	Personal Protective Equipment (PPE) Provided	<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/> Safety Shoes <input checked="" type="checkbox"/> Safety Helmet <input type="checkbox"/> Safety Belt <input checked="" type="checkbox"/> Hand Gloves <input type="checkbox"/> Face shield <input type="checkbox"/> Respirator <input type="checkbox"/> Goggles <input type="checkbox"/> Dust Mask <input type="checkbox"/> Others		Other Precautions:			
Name of Vendor Field Supervisor: <u>M. Sufyan</u>					
I verify that the above location has been examined and all necessary precautions have been taken. I ensured for the above mentioned work.					
Field Supervisor's Sign: <u>[Signature]</u>		Date: <u>21-7-2020</u>			
AUTHORIZATION					
Responsible Task Supervisor		Name: <u>Sana Ullah</u>	Sign: <u>[Signature]</u>	Date: <u>21-7-2020</u>	
EHSO (For Critical Lifts* Only)		Name: <u>M. Yasin</u>	Sign: <u>[Signature]</u>	Date: <u>21-7-2020</u>	
PERMIT EXPIRES		Date: _____	Time: _____	Sign: _____	
JOB COMPLETION (To be filled by field supervisor after completion of job)					
The work has been completed and the area has been left in safe condition					
Job completed at		Date: _____	Time: _____	Sign: _____	
* Critical Lift: Lifts >20 Ton or use of simultaneous cranes.					

JOB HAZARD ANALYSIS				Company Name:	
Prepared By:	Checked By:	Reviewed By:	Approved By (EHDC):		
Usama	M. YASIN	Sana ullah	Sagib Ali.		
Date: 21-7-2020	JHA #:				
Job/Activity:	trimming and connecting of bus bar with		Department:	Maintenance	
Worksite:	Rooker yard		Duration of work:	8 hrs	
Procedure / Work instruction available?			How many people are involved in?	14	
Supervised by:	Sana ullah / Sachit		Equipments Used?	Wire, Hand tool	
			What training / information is given?	TBT conducted	
Physical Hazards may include the following:					
Check the appropriate box for each hazard:			Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
	Work at Height	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Crane operator PPEs to all workers		
	Falling Object	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
	Slip & Trip	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
	High Heat / Light	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Fire / Explosion	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Moving Object	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
	Electrical Shock	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
	Confined space work	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Welding / Cutting	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Chemical Hazards may include the following: applying paints in production working area, with fumes or dust					
Check the appropriate box for each hazard:			Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
	Chemical Exposure	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X		
	Flammable / Explosive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Reactive / Corrosive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Toxic Gases / Poison	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Dust / Air Particles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Fumes / Vapors	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Biological Hazards may include the following: Infectious Waste					
Check the appropriate box for each hazard:			Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
	Infectious waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X		
	Contagious diseases	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Infections	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Contact with blood or body fluid	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Ergonomic Hazards may include the following: May include work design, long sitting, room temperature, ventilation, repetitive work, poor lighting					
Check the appropriate box for each hazard:			Description of hazards (s) / controlling measures required:		Based upon the hazard assessment, the following PPE is required:
	Noisy Work Environment	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X		
	Ventilation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Vibration	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Poor Lighting	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Work Rest Cycle	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	Unfavorable Climate Condition	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

SIEMENS
Simplicity by Design

COVID-19 HEALTH SCREENING FORM

Name: <u>Burhan Ahmed</u>	Contact number: <u>0321-4567045</u>
Siemens / Contractor: <u>Client NTD</u>	Direct supervisor Name: <u>NTDC (SDO)</u>
Organization of visitor/vendor (if applicable):	
To visit (Siemens/Contractor):	Name of host:
Temperature reading of visitor: <u>103 F</u> <u>100 F</u>	Recorded by staff (name): <u>Saqib Ali</u>

Self-declaration by visitor/employee	
1	<input type="checkbox"/> No symptom If you have the following symptom(s), please tick the relevant box(es) <input checked="" type="checkbox"/> Fever <input type="checkbox"/> Dry cough <input type="checkbox"/> Body aches <input type="checkbox"/> Headaches <input type="checkbox"/> Sore throat <input type="checkbox"/> Runny nose <input type="checkbox"/> Tiredness <input type="checkbox"/> Shortness of breath Others: <u>Nil</u>
2	Have you been in contact with a confirmed/probable COVID-19 patient in the past 14 days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3	Have you travelled to an area where there is ongoing community transmission of coronavirus? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, please indicate the affected country(s) or area(s): <u>Lahore</u>

Instructions to follow

Screening time 10:00 Am
Second screening time 11-15 Am.

- Kindly sanitize your hands with the liquid hand sanitizer.
- After filling the above form, send a snap/copy of it to the below mentioned details.
- Wear a mask only if you feel sick
- Wash your hands frequently for at least 20 seconds with soap
- When Coughing Cover your mouth with you sleeve, elbow or tissue. Dispose tissue after use.
- Avoid crowded places to reduce the risk of catching virus and maintain one-meter distance at least
- No handshakes

For further guidance, contact:
Project Manager / Mr. Ayaz Rasool

[Signature]
M. YASIR
EHS

[Signature]
Burhan
NTDC

Immediate action:

Unrestricted

Remove from site

1-10

[illegible]

FIRST INCIDENT REPORT				
<p>(The incident occurred on the following date: Please provide a date and time if possible. If not, provide a date and time if possible.)</p> <p>Date: <u>16-2-2020</u></p>				
<p>1. SENDER'S INFORMATION</p> <p>Incident reported by: <u>Alak Ntiti</u></p> <p>CC - BC / PR No: _____</p> <p>Phone / Extension No: _____</p>		<p>Job title: <u>Crane operator, Bank of India</u></p> <p>Sect/Dept/BU: <u>Electrical Dept.</u></p>		
<p>2. INCIDENT INFORMATION</p> <p>Location: <u>At the Assembly 1st floor</u></p> <p>Incident Date: <u>16-2-2020</u></p> <p>Department: <u>Electrical</u></p> <p>Time: <u>10:00 AM</u></p>				
<p>Incident classification</p> <p><input type="checkbox"/> Hazardous event without damage / Near miss</p> <p><input type="checkbox"/> Personal damage</p> <p><input type="checkbox"/> Environmental damage</p> <p><input type="checkbox"/> Property damage</p> <p><input type="checkbox"/> Others</p>		<p>Incident type</p> <p><input type="checkbox"/> Fire</p> <p><input type="checkbox"/> Explosion</p> <p><input type="checkbox"/> Building / Structure</p> <p><input type="checkbox"/> Plant / Equipment / Machinery</p> <p><input type="checkbox"/> Release / spillage of dangerous substance</p> <p><input type="checkbox"/> Radiation safety incident</p> <p><input type="checkbox"/> Others</p>		
<p>3. DESCRIPTION & CAUSE OF THE INCIDENT</p> <p>The crane operator and the Attendant with safety helmet. The crane are operating by the main activity at all. If he would not wear the helmet. He may perform at all operating activity and the block and other belt can touched with him.</p>				
<p>4. IMMEDIATE ACTION TAKEN</p> <p>Stop the activity and asked the attendant person which perform the activity of Bank of India. To wear proper helmet.</p>				
<p>Sender's Sign & Stamp</p> <p><u>Alak Ntiti</u></p>	<p>Date</p> <p><u>16-2-2020</u></p>	<p>Supervisor's Name</p> <p><u>M. Ntiti</u></p>	<p>Sign & Stamp</p> <p><u>M. Ntiti</u></p>	<p>Date</p> <p><u>16-2-2020</u></p>

SIEMENS

Power Transmission and Distribution
High Voltage Substations

Safety Violation Notice

Contract No	Project Name
Sub-Station	Date

Name Muhammad Mahmood ID No 3664-048808-1 Company Nelkar

You were observed by Siemens' Safety Representative in violation of HSE Rules and Regulations indicated, at:

Date 22-6-2020 Time 8:45 AM Location

- ☐ PPE not used (Specify)
- ☐ Worked in unsafe condition
- ☐ Worked on Red Tagged/Unsafe scaffold
- ☐ Alternated scaffold without permission
- ☐ Unauthorized removal of hard rails
- ☐ Removed floor opening/safety barriers/safety warnings
- ☐ Smoking at workplace/no smoking area
- ☐ Not taken adequate safety precautions while handling gas cylinders/chemicals/hazardous substances
- ☐ Not taken required safety precautions while carrying out hot work
- ☐ Others (Specify) Miss behavior

1. Consider this notice to be your First/Second/last warning
2. A sum of PKR is imposed as penalty for the above violation

Note:

1. Issuance of 3 safety violation notice shall cause your termination
2. Any future violation shall cause your removal from the site/initiating disciplinary action/imposing penalty.

Name of Foreman: Fiaz

Signature of Violator

Date: 22-6-2020

Safety Officer

Usama

Siemens (Philippines) Engineering Co., Ltd. Serial No. CS
Date 9-6-2020

NOT WORK PERMIT

THIS NOT WORK PERMIT IS REQUIRED FOR ANY TEMPORARY OPERATION INVOLVING OPEN FLAMES OR PRODUCE HEAT AND/OR SPARKS.
THIS INCLUDES, BUT IS NOT LIMITED TO WELDING, BRAZING, GRINDING & POWER TOOLS OPERATION.

Description of the work to be done: Gas cutting of structure

Date 9/6/20 Time Start 9:00 Time Finish _____

Work to be done by ☒ Contractor ☐ Siemens Responsible Task Supervisor: Sanaullah

S.No	Item	Yes	No	Remarks	Signature
	Requirement within 35 ft (11 m) of work				
1	Flammable liquids, dust, fat and oily deposits removed	<input checked="" type="checkbox"/>			
2	All wall and floor openings covered	<input checked="" type="checkbox"/>			
3	Provisions made to catch / contain the sparks	<input checked="" type="checkbox"/>			
4	Explosive atmosphere in the area eliminated	<input checked="" type="checkbox"/>			
5	Work on walls, ceilings or roofs	<input checked="" type="checkbox"/>			
6	The construction is non-combustible and does not have a combustible covering	<input checked="" type="checkbox"/>			
7	Combustibles on other side of walls, ceilings or roofs moved away	<input checked="" type="checkbox"/>			
8	Work on enclosed equipment (Tanks, containers, ducts etc.)	<input checked="" type="checkbox"/>			
9	Utilities (e.g. Electricity, Gas, Oil) supply to the equipment disconnected	<input checked="" type="checkbox"/>			
10	Equipment cleaned of all combustibles	<input checked="" type="checkbox"/>			
11	Pressurized vessels, piping & equipment removed from service, isolated and vented	<input checked="" type="checkbox"/>			
12	Equipment / Area purged of flammable liquids / vapors	<input checked="" type="checkbox"/>			
13	General Precautions	<input checked="" type="checkbox"/>			
14	Area segregation provided	<input checked="" type="checkbox"/>			
15	Employees briefed on safety precautions	<input checked="" type="checkbox"/>			
16	Hot work equipment & power cable in good condition	<input checked="" type="checkbox"/>			
17	Stand-by person / security required / informed for fire watch	<input checked="" type="checkbox"/>			
18	Availability of Fire Fighting Equipment in service / operable condition	<input checked="" type="checkbox"/>			
19	Fire Extinguishers Type Nos. Fire Hydrant				
20	Personal Protective Equipment (PPE) Provided				
21	Safety Shoes	<input checked="" type="checkbox"/>			
22	Safety Helmet	<input checked="" type="checkbox"/>			
23	Safety Belt	<input checked="" type="checkbox"/>			
24	Hand Gloves	<input checked="" type="checkbox"/>			
25	Face shield	<input checked="" type="checkbox"/>			
26	Respirator	<input checked="" type="checkbox"/>			
27	Caps	<input checked="" type="checkbox"/>			
28	Dust Mask	<input checked="" type="checkbox"/>			
29	Others	<input checked="" type="checkbox"/>			

Name of the Field Supervisor: Lacey

I verify that the above location has been examined and all necessary safety precautions have been taken / ensured for the above mentioned work.

Field Supervisor's Sign _____ Date 9/6/20

AUTHORIZATION:

Responsible Task Supervisor Name _____ Sign _____ Date 9/6/20

ENSO Name Sanaullah Sign _____ Date 9/6/20

PERMIT EXPIRES Date _____ Time _____ Sign _____





JOB COMPLETION (To be filled by field supervisor after completion of job)

The work has been completed and the area has been left in safe & clean condition.

Job completed at: _____ Date _____ Time _____ Sign _____

Corporate Environmental Protection, Health Management and Safety SPEHSF-006/13-22 of 15

Page: 1/1

HAZARD ANALYSIS		Company Name:	
Checked By:	Reviewed By:	Approved By (EHS):	
Activity: <i>Gas cutting of structure</i>		Department:	
Location: <i>Labuwal</i>	How many people are involved in?	Duration of work:	
Equipment / Work structure available?	Equipment Used?	<i>Gas cutter</i>	
Operated by:	What training / information is given?	<i>TBT</i>	
Physical Hazards may include the following: e.g. Check the appropriate box for each hazard:			
 Work at Height Falling Object Slip / Trip High Noise / Light Fire / Explosives Moving Object Electrical Shock Confined space work Walking / Clipping	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required: <i>Mandatory PPE's</i>	Based upon the hazard assessment, the following PPE is required:
Chemical Hazards may include the following: vapours, gases, dusts, fumes or dust Check the appropriate box for each hazard:			
 Chemical Exposure Flammable / Explosive Reactive / Corrosive Toxic Gases / Poison Dust / Air Particles Fumes / Vapours	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:	Based upon the hazard assessment, the following PPE is required:
Biological Hazards may include the following: Infectious Waste Check the appropriate box for each hazard:			
 Infectious waste Contagious diseases Infections Contact with blood or body fluid	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:	Based upon the hazard assessment, the following PPE is required:
Ergonomic Hazards may include the following: May include work design, long shifts, room temperature, ventilation, repetitive work, poor lighting, etc. Check the appropriate box for each hazard:			
 Noisy Work Environment Ventilation Vibration Poor Lighting Work Rest Cycle Unfavorable Climate Condition	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Description of hazards (s) / controlling measures required:	Based upon the hazard assessment, the following PPE is required:



Photograph of Environment Inspector with CC site management staff for the sub project



Site operational after work completion



Site maintained with proper housekeeping and safety signs



Photograph of Env Inspector site visit with SC on site clearance



Site clearance evidences along the right of way



Site restored for agricultural purposes with vegetation all around towers



Site clearance evidences along the right of way

Annexue II: Contractor's Environmental Monitoring Report

II.1 Environmental Monitoring Report. December 2019 - ADB100

Environmental Monitoring Report **ADB-100- Sahiwal GS (Extension Project).** **For the Month of June, 2020.**

Contents

Introduction.....	2
Environmental Monitoring Report Layout.....	2
Location of the Project.....	2
Environmental Monitoring Requirement & Parameters.....	2
Environmental During Construction Phase.....	3
Project Environmental Key Personnel.....	3
Impact on environmental parameters during Construction Phase.....	3
Air Quality.....	3
Air Quality Test Reports.....	4
Impact on Water Quality.....	4
Water Test Results.....	5
Impact on Noise Level.....	5
Noise Monitoring Result.....	5
Mitigation Measures.....	7
Air Quality.....	7
Water Quality.....	7
Noise Level.....	7
Solid and Hazardous Waste.....	7
APPENDIX 1.....	8
Air Monitoring Lab Report:.....	8
APPENDIX 2.....	9
Water Lab Report.....	9
Conclusion.....	10

Introduction

The Environmental Monitoring Plan is developed to eliminate and/or mitigate the impacts envisaged at the design, construction and operation stages.

Punjab Environmental Protection Act 2012 (PEPA) is also required to ensure compliance with the National Environmental Quality Standards (NEQS) and establish monitoring and evaluation systems.

The extension of 500kV Sahiwal GS includes all civil works, excavation, modification of buildings trenches, gantries foundation, transformer path roads, equipment foundations, and transformer foundations, cable trenches and ducts.

During the construction period, the monitoring activities will focus on ensuring that environmental mitigation measures are implemented, and some performance indicators will be monitored to record the Sub-projects environmental performance and to guide any remedial action to address unexpected impacts. Monitoring activities during project operation will focus on recording environmental performance and proposing remedial actions to address unexpected impacts

Environmental Monitoring Report Layout

The EMP clearly layout:

- (i) The measures to be taken during both construction and operation phases of the project to eliminate or offset adverse environmental impacts, or reduce them to acceptable levels;
- (ii) The actions needed to implement these measures; and
- (iii) A monitoring plan to assess the effectiveness of the mitigation measures employed.

Environmental management and monitoring activities for the under-construction extension work of 500kV Sahiwal Grid Station project could be monitoring and management during:

- (a) Construction phase.
- (b) Operation phase.

Location of the Project

500/220kV Yousafwala Grid Station located in Sahiwal District, Punjab, Pakistan.

Environmental Monitoring Requirement & Parameters

The project is committed to monitor and manage its surrounding environment so as to reduce the negative impacts which may arise from the project activities. To control the adverse impacts on ambient air, water, noise and safe environmental management, the NETRACON TECHNOLOGIES is regularly monitoring and managing its construction site.

The monthly monitoring reports for the Month of June 2020 has been done. Precisely the following pre-determined parameters as indicated below are being regularly monitored subsequent management program has also taken under consideration for successful completion of the project.

- a) Air Quality (CO, NO, NO₂, SO₂, PM_{2.5}, PM₁₀)
- b) Ambient Noise Level.
- c) Water Tests.

Environmental During Construction Phase

According to environmental monitoring, during the assignment the main work was to collect the ambient air samples to measure air pollutants and noise level data from the project area.

Monitoring and Management parameters (Construction Phase)	For the month of June 2020
Ambient Air Quality	Done
Noise Level	Done
Water test	Done

Project Environmental Key Personnel

Sr No	Project Key Personnel	Name of Key Person
01	Site Manager Siemens/HSE Engineer Siemens/ Environmental specialist Siemens	Engr Syed Akber/Yasir
02	Site Manager NTT/HSE Engineer NTT	M Tahir/M Usama
03	Field Analyst, Pak Green Enviro – Engineering Pvt. Ltd. (EPA Certified)	Mr Adil.

Impact on environmental parameters during Construction Phase

Air Quality

During the construction phase vehicles are carrying construction materials to the site and taking construction debris out of the site maintaining proper cover on its carrier to minimize the dispersion of dusts. Construction equipment, such as stone (aggregate) crushers is not being used at the site which could create significant emission of particulate matters.

Since construction of the proposed 500kV GS Sahiwal (Extension work) project would most likely involve significant earth works, increase in particulate matter in the air from wind-blown dust is also a concern

Ambient Air Quality has been monitored at one place in the premises of 500kV GS Sahiwal.



Photo: Ambient Air Monitoring at 500kV Sahiwal Grid Station (Extension Work) Project

Air Quality Test Reports.

Note: Lab Report can be seen in APPENDIX 1.

Impact on Water Quality.

There was only one water sample has been collected.



Photo: Water sample Collection at 500kV Sahiwal Grid Station (Extension Work) Project

Water Test Results

Note: Lab report attached in Appendix 2.

Impact on Noise Level

During construction stage major source of noise is expected to be generated from transport vehicles which include cranes excavator, trucks etc. Also noise is expected to be produced from various construction activities at site. Test has done in two different timings.

Noise Monitoring Result

Site Name: ADB 100, Extension 500kV Sahiwal.

Date: 28-06-2020

Location: Yousafwala

Time: 6:30 AM & 3:00 PM

Instrument Name: Smart Sensor-Digital Sound Level Meter

Name of Field Analyst: M Usama

OBSERVATIONS of First Time (6:30 AM).

Sr No	Location	Min. Level (dB)	Max. Level (dB)	Equivalent Noise Level (db)
1	Site Office	50.0	52.2	51.1
2	ATR Spare Foundation	54.4	58.4	56.4
3	Storage Area (132 kV Side)	51.6	53.6	52.6
4	1 st Gantry (500kV Yard)	50.2	58.4	54.3



Photo: Noise Monitoring (6:00 AM) at 500kV Sahiwal Grid Station (Extension Work) Project

OBSERVATIONS of Second Time (3:00 PM).

Sr No	Location	Min. Level (dB)	Max. Level (dB)	Equivalent Noise Level (db)
1	Site Office	52.6	51.4	52.0
2	ATR Spare Foundation	55.2	59.2	57.2
3	Storage Area (132 kV Side)	50.6	55.2	52.9
4	1 st Gantry (500kV Yard)	51.0	57.2	53.6



Photo: Noise Monitoring (3:00 PM) at 500kV Sahiwal Grid Station (Extension Work) Project

Mitigation Measures

Air Quality

To reduce the generation of dust owing to movement of construction materials including vehicles, regular water spray are being accomplished at construction site. Movement of construction debris are being covered while hauled and stored, roads properly cleaned and water sprayed in order to minimize dust in air. To reduce generation of dust the stone crusher has not been allowed at construction site.

Water Quality

The labor camp is outside the project boundary and from that place possible management has been ensured to avoid any contamination of any sort around the project boundary.

Noise Level

- Use equipment i.e., designed with noise-control provision;
- Route truck traffic away from noise-sensitive areas, where feasible;
- Unnecessary vehicle movement has been avoided at project site;
- Switch off the engines while remain unused

Solid and Hazardous Waste

The solid wastes of domestic nature generated mainly in the labor sheds are regularly being collected in a separate bin and being disposed through municipal cleaners and being dumping in a designated municipal dumping place. The labor camp/sheds at outside the project boundary. In addition, a small amount of solid kitchen wastes generates during day time which are also being disposed in methodic way through municipal cleaner.

If there is Construction waste, like debris, waste scrap iron, rod etc. are collected weekly basis and stored at designated place and disposed of to the municipal disposal site.

APPENDIX 1

Air Monitoring Lab Report:



EPA Certified

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025 : 2005 Accredited Lab, ISO 9001:2015, 14001:2015, OHSAS 18001:2007

Doc. #: PGG/IMS/FF/063 Issue Date: 13-Oct-17 Issue # 01 Rev. # 00

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

TEST REPORT

Ref #: PGG/LAB/2020-2053/AA

Date: 13-July-20

Name of Industry/Unit:
Address of Industry:
Nature of Monitoring:
Location:
Monitoring Instrument:
Monitoring Duration:
Monitoring Date:

Netracon Technologies (Pvt) Ltd
500 Kv Grid Station, Yousuf wala, Sahiwal
Ambient Air
Near NTT Office (220 Kv Yard)
Impinger Method, Fine Dust Sampler (IPM-FDS 2.5/10µ)
8 hours
07-July -20

Results:

Parameters	CO	NO	NO ₂	SO ₂	PM _{2.5}	PM ₁₀
	mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
10:00 AM	1.90	25.29	39.26	20.54	30	88
11:00 AM	1.89	19.80	26.20	16.45		
12:00 AM	0.87	15.32	20.90	16.98		
1:00 PM	0.46	20.19	26.32	21.24		
2:00 PM	0.49	20.87	35.12	20.80		
3:00 PM	0.59	27.22	31.46	17.31		
4:00 PM	1.53	20.45	24.65	20.90		
5:00 PM	1.02	19.36	26.12	21.24		
Average	1.09	21.06	28.75	19.43		
PEQS	5	40	80	120	35	150
	8 Hours	24 Hours	24 Hours	24 Hours	24 Hours	24 Hours

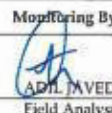
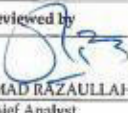

End of Report

PEQS: Punjab Environmental Quality Standards

Note: Since air pollution has no boundaries; the monitored pollution level may represent the pollution level of whole city area with minor differences. The PM_{2.5} levels exceed PEQS in most city areas of the Punjab due to natural as well as anthropogenic factors.

Terms & Conditions:

- Analysis was conducted on the request of project proponent for his own use or PEQS compliance.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
- This report should be reproduced as a whole and not in parts.
- The responsibility of the ethical use of the results reported in this report lies with the client. Consequently, the laboratory is absolved of its responsibility for any claim that may result through the use by the client or others of the results appearing in this report.
- The report is not valid for any negotiations.
- Dually calibrated instrument was used during monitoring.

Monitoring By	Reviewed by	Approved by
 ADIL IQBAL Field Analyst	 MUHAMMAD RAZAULLAH Chief Analyst	 IFTIKHAR AHMED Laboratory Analyst



Page 1 of 1



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APPENDIX 2

Water Lab Report



EPA Certified

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.

ISO/IEC 17025 : 2005 Accredited Lab, ISO 9001:2015, 14001:2015, OHSAS 18001:2007

Doc.#: PGG/IMS/FF/063 Issue Date: 13-Oct-17 Issue # 01 Rev. # 00

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +9242-35441444 Cell: 0303-4442334

TEST REPORT

Ref #: PGG/LAB/2020-2064/GW

Date: 13-July-20

Name of Industry/Unit: Netracon Technologies (Pvt.) Ltd
Address of Industry: 500 Kv Grid Station, Yousuf wala, Sahiwal
Nature of sample: Ground Water
Sampling By: PakGreen Laboratories
Sample source: Ground Water (Bore)
Sample Code: DW-558
Sampling type (Grab/Composite): Grab
Date of sampling: 07-July-20

Results:

Sr. No.	Parameters	Unit	WHO	PEQS	Results	Method/ Technique
1.	Total Dissolved Solids (TDS)	mg/L	1000	<1000	607	APHA-2540 C

End of Report

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization

Terms & Conditions:

- Analysis was conducted on the request of project proponent for his own use/PEQS Compliance.
- Report cannot be used regarding compliance of any complaint, EPO or any other court case.
- This report should be reproduced as a whole and not in parts.
- The responsibility of the ethical use of the results reported in this report lies with the client. Consequently, the laboratory is absolved of its responsibility for any claim that may result through the use by the client or others of the results appearing in this report.
- The left-over sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.
- The report is not valid for any negotiations.

Sample Analyzed By	Reviewed by	Approved by
 QURATULAIN Lab. Analyst	 MUHAMMAD RAZA ULLAH Chief Analyst	 IFTIKHAR AHMED Laboratory Incharge



Page 1 of 1



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Conclusion

The recent Environmental Monitoring Report has been prepared on the basis monitoring through third party in the field and supported by certified laboratory report.

Monthly Environmental Monitoring of ambient air, noise and water quality parameters has been performed in June 2020. The Recent monitoring report was accomplished at the end of June 2020 by the third party.

Ambient Air Quality were determined in the site with the help of "Impinger Method, Fine Dust Sampler (IPM-FDS 2.5/10 μ) and were analyzed by Pak Green Enviro-Engineering pvt.Ltd and the lab test results is provided in the report and found to be within acceptable limit. And noise quality was done by Smart Sensor-Digital Sound Level Meter.

Water parameters were analyzed by the Pak green lab (EPA Certified) test report has attached in the main report and found to be within acceptable Limit.

House-keeping is also being maintained at the plant site. Segregated solid, liquid and hazardous waste are being monitored and managed at a designated place in coordinated manner. In case of serious accident and emergency on call ambulance and subsequent clinical facilities has been ensured by the management at site.

Overall the environmental team is regularly accomplishing the monitoring and management of required environmental parameters under construction phase of Extension work of 500kV Sahiwal Grid Station.



Action Plan



Location: 500kv Sahiwal Grid Station Extension Project

Date: 24/01/2020

Subject: Action Plan on the Issues highlighted in Site Visit of ADB Environment team.

Note: Below are before and after pictures of the observations which are now rectified.

Sr.	Observations	Status	Corrective Action Taken	Target Date
1	Proper PPE.s were insured at site for all workers.	Completed	Proper PPE.s are arrange for all worker at site.	Done
2	Electric DB wire is not proper and the DB lock is damage.	Completed	Electric DB wire is changed and the DB should lock.	Done
3	TOT of all workers near working at trenches.	Completed	IBI done near the trenches area.	Done
4	Rest area were found shabby and the shed were not properly placed.	Completed	Rest area shed were properly placed and clean the rest area.	Done
5	More colours coated dustbin is required for site.	Completed	Colours coated dustbin is arranged for site.	Done
6	Barrication is missing near the trenches.	Completed	Barrication is done near the trenches.	Done

BEFORE	AFTER
 <p>Electric DB wire and lock is damage.</p>	 <p>Electric DB wire and locked is changed</p>

SIEMENS



Colours coated Dustbin without sign board.



Colours coated Dustbin with local language sign board.



Rest area shed were found damage.



Resting area shed is properly corrected.



Barrication is missing near trenches.



Barrication is done near trenches.

SIEMENS



TBT of All workers.



TBT of All workers.



All workers wears prrproper PPF,s.



All workers worn proper PPS,s

Prepared by:

Muhammad Yasir,
EHSO
Siemens

Annexue III: Recorded Non-Compliances and Corrective Actions

See following pages.

Non-Compliances and Corrective Actions

ADB-100

<i>Category</i>	<i>Issue</i>	<i>Date issue Raised</i>	<i>Proposed Corrective Action</i>	<i>Responsibility</i>	<i>Target date</i>	<i>Status</i>	<i>Verification</i>	<i>Comments</i>	<i>Revised Target or Date Addressed</i>	<i>Days took to Address</i>
Workers Occupational Health and Safety	PPE was not available for workers at the construction sites. Workers doing onsite activities while dealing with steel rods in the deep trenches were not wearing safety gloves.	22-Jan-20	The contractor was advised to ensure the worker's health and fulfill the safety requirements at the site.	Contractor	Immediately	Closed	–	PPEs made available by CC for employees.	–	–
Workers Occupational Health and Safety	There was no access ladder present for access and egress while working at deep trenches.	22-Jan-20	The contractor was advised to endorse a permit to work system at the site while working in confined spaces	Contractor	Immediately	Closed	–	PTW system was designed and implemented.	–	–
Working at height and deep trenches	Trenches were found un-barricaded, and there were no warning signs	22-Jan-20	The contractor was advised to maintain barricading around deep trenches while working. Endorse Permit to work system at the site	Contractor	1-Feb-20	Closed	–	Trenches were barricaded and signs were available.	–	–

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Firefighting	Firefighting equipment for smaller fires is available at the fuel storage site but found outdated	14-Mar-19	The fitness of firefighting equipment should be ensured	Contractor		Closed	Yes	The contractor has maintained the firefighting equipment at the site and is up to date.	14-Apr-19	30
Resource Utilization	The contractor has prepared Waste Management Plan for the site but the solid and liquid waste characterization, quantification, and method of handling and storage were lacking.	22-Jan-20	FMC will assist CC in the modification of plans and maintaining a checklist for recording the maximal use of water and energy resources at the site.	Contractor	15-Feb-20	Closed	—	The subproject has been completed and commissioned.	—	—
Workers Occupational Health and Safety	Records for incident reporting and near misses were lacking.	22-Jan-2020	The contractor was advised to maintain a daily record for incident reporting and near misses.	Contractor	1-Feb-2020	Closed	—	The subproject has been completed and the issue was addressed as CC maintained register for incident reporting.	—	—

ADB-105 (Lot-I)

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Project Environment Safeguard Documents	Environmental approval was not obtained for the construction of TL	14-Mar-19	NTDC to obtain environmental approval for the project as per the law.	ESIC, NTDC	20-Jun-19	Closed		EIA of the project has been submitted to Punjab EPA for grant of NOC on 14-Jan-20. Approval is pending with Punjab EPA and as per the law deemed approval letter has been shared with Punjab EPA.	14-Sep-20	
Project Environment Safeguard Documents	SSEMP was available but it requires updating to the Project-specific issues and their management. Environmental receptors fall on RoW and other facilities need to identify in SSEMP	14-Mar-19	FMC of PMU, NTDC has prepared SSEMP and require to share with the Construction Contractor for implementation	ESIC, NTDC	Immediately	Closed	–	The SSEMP was shared with CC and training was also provided	–	–
Energy and water use management	There is no plan for energy and water use management.	14-Mar-19	CC to prepare the plan on how to conserve energy/ water.	Contractor	14-May-19	Closed	–	The subproject has been completed and the issue becomes insignificant	–	–

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Hazardous material handling and disposal	Sewage from toilets of the warehouse is routed to an on-site concrete pit and the Contractor will make end disposal arrangements for regular cleaning of the pit and share with NTDC.	14-Mar-19	FMC advised CC to construct proper pits. CC has not taken steps on proper handling and disposal of wastewater and the construction of the site pit at the construction camp	Contractor	14-May-19	Closed	–	The CC arranged cleaning of sewage pits on regular basis to maintain proper hygiene.	–	–
Hazardous material handling and disposal	Hazardous material such as fuel oil has been stored in bulk at the warehouse. A concrete secondary containment pit for the underground storage tank (UST) is required to build.	14-Mar-19	The CC has been advised to build a secondary containment for fuel storage whether kept on the ground or underground. FMC will keep track of the measures to be taken.	Contractor	14-May-19	Closed	–	Secondary containments for fuel storage has been arranged.	–	–
Emissions	No monitoring for noise and air quality is being undertaken by the contractor.	14-Mar-19	The CC was advised to conduct air quality and noise level measurement at construction camps and construction sites and provide evidence to FMC	Contractor	14-May-19	Closed	Yes	FMC and ESIC have arranged environmental monitoring at the project site.	03-Oct-19	170

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Grievance redress mechanism (GRM)	No community grievance redress mechanism (GRM) that allows anyone to register complaints related to camps/TL and construction activity	14-Mar-19	The CC was advised to keep a compliant register notebook at each camp and construction site and complaints, if registered, should be addressed through the community liaison officer. FMC will support CC to develop a formal GRM	Contractor	14-May-19	Closed	–	The complaint register made available by CC at construction site.	–	–
Firefighting	Firefighting equipment at the fuel storage site at the warehouse was found expired and not sufficient for larger fires	14-Mar-19	Firefighting equipment for smaller fires was available at the fuel storage site at the warehouse. However, the equipment is not enough and needs to be updated for fighting larger fires The CC has been advised to replace the expired equipment with a fresh one	Contractor	14-May-19	Closed	–	The expired fire extinguishers were replaced by new extinguishers	–	–

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Bites from poisonous and dangerous animals	The first aid kit was found lacking in necessary items. Lack of an emergency action plan	14-Mar-19	Mosquito and insect repellent should be available readily at camps and construction sites. An emergency action plan for medical emergencies should also be available, e.g. action plan in the case of a snake bite to a worker.	Contractor	14-May-19	Closed	–	The first aid kit was available but proper planning was lacking. The subproject has been completed and commissioned.	–	–
Working at height and deep trenches	PEE was not available for workers at the construction sites. However, basic required PPE was available at the construction sites	14-Mar-19	Safety harnesses, working plate forms at height, and PPEs and other safety devices for working in trenches to be provided to workers.	Contractor	14-May-19	Closed	Yes	CC arranged PPEs for workers.	18-Dec-19	236
Hygiene Condition	The hygienic condition of the warehouse's toilets was found to be poor	16-Jul-19	The restrooms should be kept clean all time	Contractor	Immediately	Closed	Yes	–	20-Jul-19	04
Hazardous material handling and disposal	Oil spills found near oil storage drum near UST kept at the warehouse.	16-Jul-19	Contaminated soil from oil spill should be removed and disposed of appropriately	Contractor	Immediately	Closed	Yes	Not observed and contamination at the spot. The soils were removed for disposal.	20-Jul-19	04

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
General Housekeeping	At the warehouse, poor housekeeping was observed especially in rest areas and outside rooms.	18-Dec-2019	The CC was advised to improve general housekeeping conditions at camps sites and construction sites by training staff on waste segregation, collection, and disposal	Contractor	14-Feb-20	Closed	–	General housekeeping was improved significantly but waste segregation was done satisfactorily	–	–
Hazardous material handling and disposal	Fresh fuel oil spills, were observed on premises of the construction camp	18-Dec-2019	Contaminated soil from oil spill should be removed and disposed of appropriately	Contractor	14-Feb-20	Closed	–	Contaminated soil from oil spill was removed and disposed of appropriately	–	–
Construction Material	Construction material left behind at Construction Camp after the demobilization of CC	23-Jul-2020	Construction camps should be rehabilitated by removing all materials and structures built during the construction time before demobilization from the campsite.	Contractor	23-Aug-2020	Closed	–	These utilities will be used by another contractor employed by NTDC for a substation construction at the same site	–	–
Building Structures	Building structures left behind at Construction Camp after demobilization of CC	23-Jul-2020	Construction camps should be rehabilitated by removing all materials and structures built during the construction time before demobilization from the campsite.	Contractor	23-Aug-2020	Closed	–	These utilities will be used by another contractor employed by NTDC for a substation construction at the same site.	–	–

Category	Issue	Date issue Raised	Proposed Corrective Action	Responsibility	Target date	Status	Verification	Comments	Revised Target or Date Addressed	Days took to Address
Hazardous material handling and disposal	Dug pit having sewerage solid sludge left behind at Construction Camp after the demobilization of CC	23-Jul-2020	Construction camp should be rehabilitated by removing all waste including sludge from the pit before demobilization from the campsite.	Contractor	23-Aug-2020	Closed	–	These utilities will be used by another contractor employed by NTDC for a substation construction at the same site.	–	–