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(Part A)**

Prepared by Power Grid Company Limited (PGCB), Government of Bangladesh for the Asian Development Bank (ADB).

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SEMI ANNUAL ENVIRONMENTAL SAFEGUARD MONITORING REPORT: DHAKA AND WESTERN ZONE TRANSMISSION GRID EXPANSION PROJECT



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ENVIRONMENTAL AND SOCIAL SAFEGUARD MONITORING REPORT: DHAKA AND WESTERN ZONE TRANSMISSION GRID EXPANSION PROJECT

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ABBREVIATIONS

Abbreviation	Full Form
ADB	Asian Development Bank
AIS	Air insulated Switchgear
BIWTA	Bangladesh Inland Water Transport Authority
BOD	Biological Oxygen Demand
CAP	Corrective Action Plan
CESMP	Construction Environment and Social Management Plan
CO	Carbon Monoxide
COD	Chemical Oxygen Demand
DC	Deputy Commissioner
DO	Dissolved Oxygen
DoE	Department of Environment
DWZTGEP	Dhaka and Western Zone Transmission Grid Expansion Project
ECC	Environmental Clearance Certificate
ECR	Environment Conservation Rules
EHS	Environmental Health and Safety
EMF	Electro Magnetic Force
EMP	Environmental Management Plan
EQMS	EQMS Consulting Limited
ESU	Environmental and Social Unit
FGD	Focus Group Discussion
FGL	Finished Ground Level
FY	Fiscal Year
GCC	General Conditions of Contract
GIS	Gas Insulated Substation
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HFL	Highest Flood Level
HIV/STI/STD	Human Immunodeficiency Virus / Sexually Transmitted Infections / Diseases
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEE	Initial Environmental Examination
IEE	Initial Environment Examination
IFC	International Finance Corporation
kV	Kilovolt
kWh	kilo Watt hour
Leq	Equivalent Continuous Sound Level
LILO	Loop-In Loop-Out
LILO	Line In Line Out
MVA	Mega Volt Ampere

Abbreviation	Full Form
NO ₂	Nitrogen Dioxide
O ₃	Ozone
OHTL	Overhead Transmission Line
PIU	Project Implementation Unit
PM2.5 / PM10	Particulate Matter (2.5 / 10 microns)
PMU	Project Management Unit
PPE	Personal Protective Equipment
RoW	Right of Way
SCC	Special Conditions of Contract
SO ₂	Sulfur Dioxide
SPS	Safeguard Policy Statement
TDS	Total Dissolved Solids
TL	Transmission Line
WB	World Bank

EXECUTIVE SUMMARY

- i. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZGEP) of a total investment of \$730.0 million will ensure that the capacity of electricity supply in Dhaka and western zone of Bangladesh is upgraded, with improvements in the technical efficiency of the transmission system. The proposed project is expected to provide support for the construction of new substations and transmission lines and support the improvement of the existing transmission network of Power Grid. The DWZTGEF will also strengthen the power transmission system in southwest and northwest Bangladesh to enhance its reliability and efficiency. The project area comprises agricultural land, where, due to inadequate surface water supply, cultivation mostly depends on groundwater. Hence electricity demand is at its peak during the irrigation season. Furthermore, the electricity demand in the southwest is expected to rise in the near future with large scale industrialization expected as construction of the Padma Bridge has been completed. The subprojects of DWZTGEF are situated in five administrative divisions and twenty-one districts of Bangladesh, comprising construction of 15 new substations, ten overhead transmission lines and ten Line-In Line-Out (LIL) connections of a total length of 394 km overhead lines, 11.60 km underground lines in Dhaka, and bay extensions in 9 existing grid substations. All the subprojects are located in agricultural lands and in settlement areas. No ecologically sensitive habitats or national protected areas are found in the project area. According to the Environment Conservation Act 1995 and Environment Conservation Rules 2023 of Bangladesh, transmission lines more than 25 km are categorized as 'Red category' projects that require an Initial Environmental Examination (IEE) for site clearance and environment clearance. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and valid till 28/07/2025. According to the Environment Conservation Rules 2023 transmission lines (more than 25 km) are categorized as 'RED Category' project¹. The project also needs to comply with Asian Development Bank (ADB)'s safeguard requirements. IEE document has been prepared to fulfill environmental assessment requirements under ADB's Safeguard Policy Statement (SPS) 2009. IEE is updated and disclosed whenever any unexpected impacts or design changes occur during project implementation. The IEE study has been done based on both primary and secondary data. A composite and interdisciplinary approach has been developed for this study, based on the guidelines of DoE and ADB's SPS 2009. A scoping process was followed to identify Important Environmental (IECs) and Social Components (ISCs), which are likely to be impacted by interventions of the project. Impacts on ecological resources will be minimal and localized in all phases of the project because there is no ecological or environmentally sensitive area. The Right of Way (RoW) of the transmission lines and the lands for the grid substations (GSs) are on low lying ground. Lands along the transmission lines are predominantly cultivated, at least in the dry season, and have homestead activities. Rice-based crops are grown mainly in the dry season along with potatoes, onions, mustard, garlic, jute and other vegetables. An area of 79.60 acres land in 15 new substations plus one existing substation and 1 acre of land tower footings, will be changed from the land type of agricultural use and fisheries. The proposed bay extensions would not require land acquisition as the required land extents are available within the existing GSs premises, except for Satkhira, which needs 3 acres for the bay extension. There will be a minor impact of noise for short periods during construction of foundations for the transmission line towers and also result in temporary increase in traffic, but work will take place during daytime and residents close by will be warned of any foundation piling activity. The transmission and LIL lines will traverse some populated areas. Therefore, inspection of existing electromagnetic fields (EMF) along the selected routes of existing and new transmission lines in populated areas would be important. For housing structures, clearance between the transmission line and roof tops should be 6.5m-8m and for river crossings it will be 14.6m-15.9m which will be ensured through using towers of appropriate extensions. The estimated EMF values are within the ICNIRP public exposure limits. No houses or people will be directly affected by the EMF of transmission and LIL lines.

¹ Schedule 1, Environment Conservation Rules 2023

- ii. During the construction phase of the project, there will be some environmental impacts with machinery and vehicle movement for construction tower foundations, the erection of towers and stringing of conductors. Various activities will take place for towers and new GSs construction including land filling, storage of construction materials, activities of workers and movement of construction vehicles. Mitigation measures are proposed in the Environmental Management Plan (EMP) and is included in contracts to ensure that good practices are observed as per the measures identified in the EMP. PMU ensures that EMP is strictly followed during the project implementation time.
- iii. A Grievance Redress Mechanism (GRM) has been established. The Power Grid has set up a Project Management Unit (PMU) to implement the project. The implementation of EMP and CAP will be monitored to ensure the ADB's SPS 2009 will be met. This safeguard report highlights project progress details including any environmental and social safeguard issue.

Table 1: Project Information

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Executing Agency	Power Grid Bangladesh PLC (Power Grid)
Implementing Agency	Power Grid Bangladesh PLC (Power Grid)
Environment Safeguards Categorization	B
Environment Safeguards Documentation	IEE/Existing Facilities CAP/EMP
Project Stage Obtained	Design/Construction
Detailed Design Required Post-Approval	Design service is included in EPC contractor's scope, approval required from Power Grid. Detailed design approved for following transmission line subprojects: 1. Satkhira-Manirampur 2. Satkhira-Rupsha 3. Kushtia-Meherpur 4. Kaliganj-Maheshpur 5. Purba Sadipur-Domar 6. Domar-Hatibandha 7. Niamatpur-Patnitala 8. Gopalganj-Shibchar 9. Bagerhat-Pirojpur-Bhandaria 10. LILO of 132 kV Noapara-Khulna TL to Phultola 11. LILO of 132 kV Goalpara-Bagerhat TL to Rupsha 12. LILO of 132 kV Gopalganj-Gallamari TL to Rupsha 13. LILO of 230 kV Rupsha PP-Khulna (S) TL to Rupsha Layout approved for following substation subprojects: 1. Kaliganj 400/230 kV Substation

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project				
				2. Purbachal 400/230/132 kV Substation 3. Rupsha 230/132/33 kV substation 4. Phultola 132/33 kV Substation 5. Manirampur 132/33 kV Substation 6. Meherpur 132/33 kV Substation 7. Maheshpur 132/33 kV Substation
Contract(s) Awarded				4 for transmission line construction (packages 1, 2, 3 and 4) and 3 for substation construction (packages 5, 6, and 7) in total. The contract for package-8 has been terminated on contractor's default and rebidding has been initiated.
Bidding Document(s) Include EMP Cleared by ADB				8 bid documents (4 transmission lines & 4 substations) have been cleared by ADB
Contract(s) Awarded Include EMP Cleared by ADB				YES, 4 for transmission line construction and 3 for substation construction.
National Environment, Health and Safety Clearance(s) Obtained				YES, ECC was valid till 28/07/2025,
Contractor(s) Given Access to Site				YES, 13 for transmission line construction and 7 for substation construction
Construction Progress (%)				Construction progress for the following sub-projects that have started on site: Package-1: Route survey, tower spotting, mobilization ongoing. Package-2: Commissioned in June 2025. Package-3: Tower foundation, erection and stringing works of Satkhira-Manirampur, Satkhira-Rupsha, Kushtia-Meherpur and Kaliganj-Maheshpur transmission lines are ongoing, overall progress is approximately 85% as of June 2025. Package-4: Tower foundation, erection and stringing works of Gopalganj-Shibchar, Purba Sadipur-Domar, Niamatpur-Patnitala, Domar-Hatibandha and Bagerhat-Pirojpur-Bhandaria transmission lines are ongoing, overall progress is approximately 80% as of June 2025. Package-5: Civil Construction ongoing. Package-6: Civil Construction ongoing. Package-7: Civil works at Rupsha, Phultola, Manirampur, Maheshpur and Meherpur substations are ongoing. Land development is ongoing at Satkhira. Physical progress is around 40% as of June 2025.

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
	Package-8: The contract has been terminated effective from 27/05/2024.
Unanticipated Impacts including Change of Scope or Design	Scope of package-1 has been reduced significantly, the revised scope has been cleared by ADB, and it will be reflected in the next IEE Addendum. Changes in alignment of routes for 2 transmission line contracts awarded, Addendum 1 to IEE has covered the following subprojects: 1. Satkhira-Manirampur 2. Gopalganj-Shibchar Addendum 2 to IEE covered the following sub-projects: 1. Satkhira-Rupsha 2. Purba Sadipur-Domar 3. Niamatpur-Patnitala Addendum 3 to IEE covered the following sub-projects: 1. Kushtia-Meherpur 2. Domar-Hatibandha 3. Bagerhat-Pirojpur-Bhandaria Addendum 4 to IEE covered the following sub-projects: 1. Kaliganj- Maheshpur 132 KV Double Circuit Transmission Line 2. 230/132/33 KV GIS Substation at Rupsha 3. 132/33 KV GIS Substation Meherpur 4. 132/33 KV GIS Substation Manirampur 5. 132/33 KV GIS Substation Maheshpur and 6. 132/33 KV GIS Substation Phultola Addendum 5 to IEE covered the following sub-projects: 1. Rampura- Bashundhara 132kV double circuit underground cable line 2. 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) 3. 400/230 kV Indoor GIS Substation: Purbachal
Number of Site Inspections and Audits Undertaken by Environment Safeguards Staff in Reporting Period	9
Corrective Action Required from Previous Reporting Period	6
Outstanding Corrective Action this Reporting Period	Yes. 16 Corrective Actions were identified during this reporting period
Non-Compliances Recorded this Reporting Period	Ten (10)

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Corrective Action Required	YES
Number of Health and Safety Incidents	11 (near miss)
GRM Functional	YES, GRM functions at construction sites of packages 2, 3, 4, 5, 6 and 7. For other packages, it will be made functional once the construction activity commences.
Number of Unresolved Grievances from Prior Reporting Period	0
Number of Grievances Received in Reporting Period	0
Number of Grievances Resolved this Reporting Period	0
Number of Grievances Still Outstanding	0
Number of Grievances referred to Court of Law	0
Number of Grievances referred to the Accountability Mechanism	0
Total Training Conducted	77
Total consultation carried out	11
Number of packages that conducted Quarterly Environmental Quality Monitoring	5 (Package 2,4, 5, 6 & 7)

1 INTRODUCTION

1. The development policy framework of the Government of Bangladesh envisages sustainable development and moving towards a middle-income threshold by year 2021. The per capita income is rising steadily, from \$1,110 in 2014 to \$1,675 in 2018. The GDP growth rate in 2016 was 7.2% while in 2018, it further increased to 7.9%, meeting the national economic growth target of 7.0%. In contrast, the per capita grid electricity consumption in Bangladesh is only 336 kWh, which is lower than its neighboring countries. Electricity consumption is growing rapidly at an annual rate of over 6%, largely due to the growth in per capita income, increasing industrialization and the expansion of the agriculture and commercial sectors. Energy demand is expected to increase threefold by 2035 as the government rolls out connections to rural households and Bangladesh continues on a trajectory of strong economic growth. Electricity demand would need to increase to 33,708 MW by 2035 to meet the desired service quality and quantity projected under future growth. In the endeavor to become a high-income country by 2041, development of energy and power infrastructure is vital for Bangladesh.
2. The government's strategy is to promote power sector, and it has embarked on implementation of a master plan to add low cost, base load power generation capacity to compensate for declining domestic gas production and replacement of expensive diesel and fuel oil-based power plants. It provides subsidies, including lifeline consumption, to support the objective of increasing electricity distribution to all parts of the country. For the energy sector, national targets include increased access to electricity, from 93% in 2018, and reaching 100% by 2021. Increase in per capita consumption, from 170 kWh in 2010 to a target of 514 kWh by 2020 is anticipated.
3. The Power Division, under the Ministry of Power, Energy and Mineral Resources (MPEMR) leads the power sector while the Bangladesh Energy Regulatory Commission (BERC) is the regulatory body which regulates electricity, gas, and petroleum sectors. The electricity sector is unbundled into generation, transmission, and distribution segments. Backbone transmission lines and substation network in the country are operated by the Power Grid Company of Bangladesh Limited (Power Grid). As of December 2018, Power Grid network comprised transmission lines operated at 400 kV, 230 kV and 132 kV voltage levels with a total length of 11,396 circuit km and 125 132/33 kV substations with a cumulative capacity of 20,211 MVA. Development of transmission and distribution network in line with generation has been identified as a key element of the power sector strategy in the 'Bangladesh Seventh Five Year Plan FY 2016 – FY 2020'. Development of an inter-region transmission network is required due to the imbalance in concentration of generation and demand, while local network expansions are required to cater to the increasing demand at new load centers. Due to the growing electricity demand, a considerable number of grid substations and transmission lines have already been overloaded. Therefore, urgent upgrades and expansions are required by Power Grid to supply power to the key economic corridors in the southern and western regions including the greater Dhaka area.
4. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZTGEP) focuses on expanding the local transmission network to deliver electricity to new and expanding load centers while meeting the network operating criteria.
 - a) **Component 1: Transmission system in Greater Dhaka expanded.** The project will construct and commission substations with a total capacity of 4,450 MVA and 40 km of transmission lines in Greater Dhaka.
 - b) **Component 2: Transmission system in Western Zone expanded.** The project will construct and commission substations with a total capacity of 3,070 MVA and 368 km of transmission lines in the western zone.
 - c) **Component 3: Institutional Capacity of Power Grid strengthened.** The project will enhance capacity by establishing a Drone Inspection Center within the operation and maintenance department of Power Grid with some gender equality elements.

1.1 Scope of the Project:

A. 400 kV Transmission Line: 02 km

- i. LILO of Ghorashal-Kaliganj-Purbachal-Bashundhara transmission line to Kaliganj and Purbachal: 01 km each

Previously this scope included construction of Kaliganj-Purbachal 400 kV transmission line (18 km). However, due to RoW issues on another project of Power Grid, the scope has been revised and it has been decided that the Kaliganj-Purbachal line will be built by that project of Power Grid as a part of Ghorashal-Kaliganj-Purbachal-Bashundhara line. Only connection from this line to Kaliganj and Purbachal substations will be made under DWZTGE Project, each connection will be 01 km, so 02 km in total. Hence scope has reduced significantly and there will be less environmental impact due to the scope reduction. Also, since Kaliakoir-Bhulta 400 kV line has not been constructed yet, LILO of this line to Kaliganj has been excluded.

B. 230 kV Transmission Line: 138.5 km

- i. LILO of Tongi–Ghorashal 230kV double circuit line at Kaliganj: 3.5 km
- ii. Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing line.
- iii. Purba Sadipur -Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km.
- iv. Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line.
- v. LILO of Rupsha Power Plant- Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km
- vi. LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation: 1 km

Due to the unavailability of the required land, both Purbachal 400kV and 230 kV substations will be constructed in the same area. Hence lines connecting the substations (Purbachal 400 kV – Purbachal-2 230 kV double circuit underground cable line: 5km and River Crossing portion of Purbachal 400 kV – Purbachal-2 230 kV double circuit line: 0.5 km) will no longer be required.

C. 132 kV Transmission Line: 244 km

- i. Rampura-Bashundhara 132kV double circuit cable line: 11.60 km underground

Previously the route length was determined as 9.5 km. However, in order to avoid conflict with the under-construction metro line in the vicinity of the proposed route, the route has been revised slightly and route length has increased to 11.60 km.

- i. Satkhira-Manirampur 132 kV double circuit line: 33 km
- ii. Kaliganj-Maheshpur 132 kV double circuit line: 28 km
- iii. Kushtia-Meherpur 132 kV double circuit line: 48 km
- iv. Niamatpur-Patnitola 132 kV double circuit line: 32.5 km
- v. Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m river crossing line.
- vi. Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.3 km river crossing line.
- vii. LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km
- viii. LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km
- ix. LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km
- x. LILO of Madaripur- Faridpur 132 kV double circuit line at Bhanga: 0.5 km
- xi. LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km

D. 400 kV Substation: 02 nos.

- i. 400/230/132 kV Indoor GIS Substation: Purbachal with 3×52/750 MVA 400/230 kV transformers and 2×350/450 MVA 230/132 kV transformers.

The original plan was to construct Purbachal 400/230 kV and Purbachal-2 230/132 kV substations at sites approximately 5.5 km apart. However, required land for Purbachal-2 substation could not be handed over by the concerned authority and hence both the 400/230 and 230/132 kV substations will be constructed in the premises of the 400/230 kV substation, and it will be a 400/230/132 kV substation.

- ii. 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision).

E. 230 kV Substation: 02 nos.

- i. 230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer
- ii. 230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision)

F. 132 kV Substation: 10 nos.

- i. 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer
- ii. 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer
- iii. 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer
- iv. 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer
- v. 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)
- vi. 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer
- vii. 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer
- viii. 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer
- ix. 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer
- x. 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)

G. 132 kV Bay Extension: 20 nos.

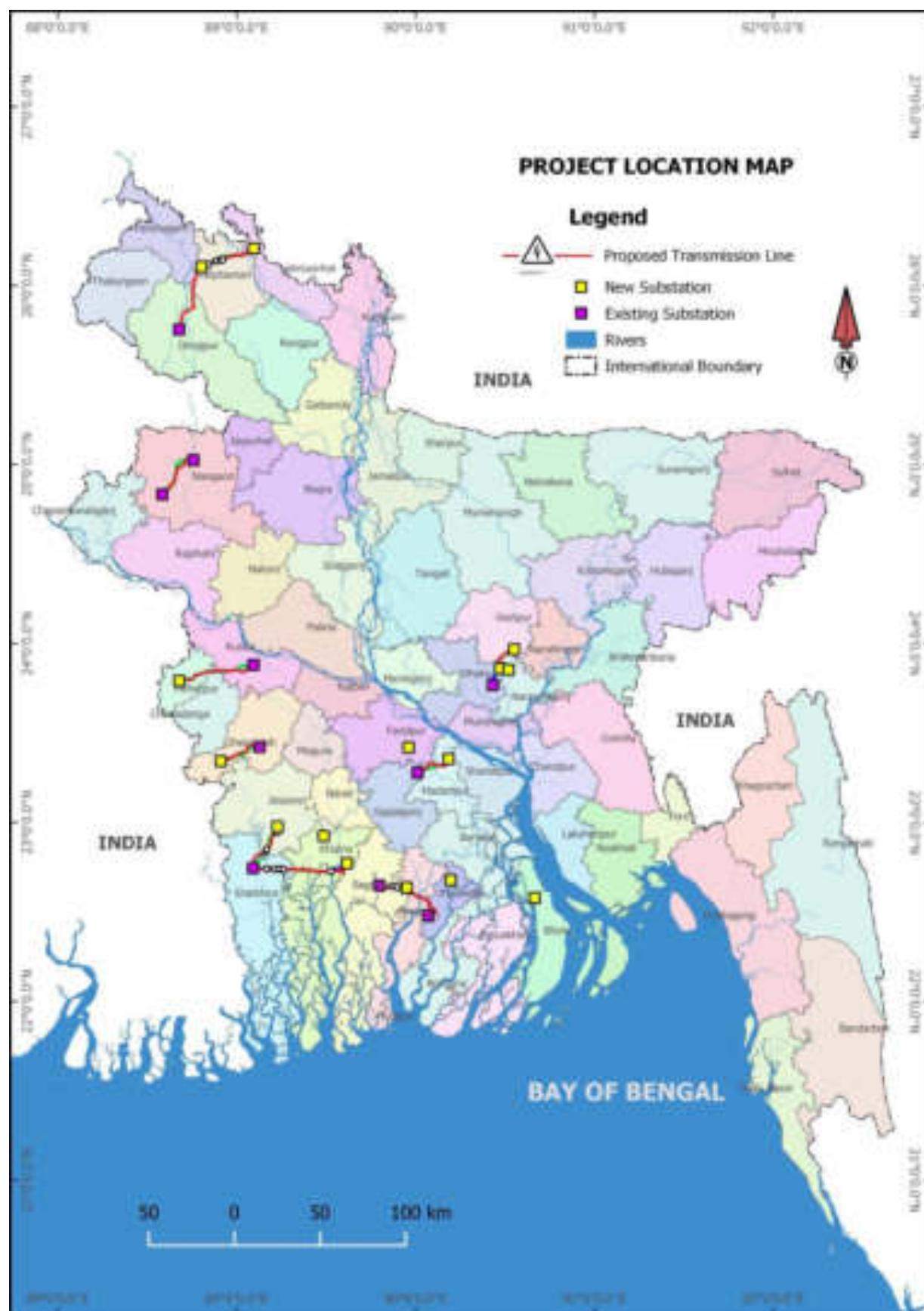
- i. 4 nos. 132 kV AIS Bay Extension at Satkhira Substation (Increase in bay extensions from 2nos. originally planned but there is no additional land required)
- ii. 2 nos. 132 kV AIS Bay Extension at Kaliganj Substation
- iii. 2 nos. 132 kV AIS Bay Extension at Patnitala Substation
- iv. 2 nos. 132 kV GIS Bay Extension at Niamatpur Substation (change from AIS due to lack of space)
- v. 2 nos. 132 kV AIS Bay Extension at Gopalganj Substation
- vi. 2 nos. 132 kV GIS Bay Extension at Bagerhat Substation (change from AIS due to lack of space)
- vii. 2 nos. 132 kV AIS Bay Extension at Kushtia Substation²
- viii. 2 nos. 132 kV GIS Bay Extension at Purba Sadipur Substation
- ix. 2 nos. 132 kV GIS Bay Extension at Bhandaria Substation

² It was incorrectly reported in the IEE as a GIS, but it has always been planned as an AIS.

5. Geographically, the project area is spread over 42 city corporations/municipalities/sub-districts of 21 districts of 5 administrative divisions of Bangladesh which are listed below:

Table 1-1: Project Administrative Area

Division	District	City Corporation/ Municipality/ Sub-District
Dhaka	Dhaka, Faridpur, Madaripur, Gazipur, Narayanganj, Gopalganj	Dhaka North City Corporation, Kaliganj, Rupganj, Bhanga, Shibchar, Madaripur Sadar, Moksedpur
Barishal	Pirojpur, Bhola, Jhalokathi, Patuakhali	Bhola Sadar, Jhalokathi Sadar, Mirzaganj, Pirojpur Sadar, Rajarpur, Bhandaria
Khulna	Bagerhat, Jashore, Jhenaidah, Khulna, Kushtia, Meherpur, Satkhira	Bagerhat Sadar, Fakirhat, Kachua, Rupsha, Batiaghata, Keshabpur, Manirampur, Kaliganj, Maheshpur, Dumuria, Phultola, Kushtia Sadar, Mirpur, Rajoir, Gangni, Meherpur Sadar, Satkhira Sadar, Tala
Rajshahi	Naogaon	Mahadebpur, Niamatpur, Patnitola
Rangpur	Dinajpur, Lalmonirhat, Nilphamari	Birganj, Kaharule, Khanshama, Hatibandha, Dimla, Domar, Nilphamari Shadar
5 (Five)	21 (Twenty-One)	42 (Forty-Two)



Source: Power Grid Company of Bangladesh (Power Grid) Ltd, 2022

1.2 Project Implementation Status

6. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 which was valid till 28/7/2025 and further extension will be applied on after approval of project DPP time extension. Bid documents of each package contain SCC Clause -47 which makes the EMP part of the contract (see Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (see Annexure-5). Links to approved CESMPs of packages- 2, 3, 4, 5, 6 and 7 are available as Annexure-6. Moreover, CSEMP of package 1 was submitted by contractor and PMU has raised some comments and requested to submit the revised CSEMP (Annexure 38). Also progress status on implementation of environmental management activities shown in below table.

Table 1-2: At a glance of component wise project scope and present status

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
Package-1	400 kV and 230 kV LILO at Kaliganj & Purbachal	Contract signed with Hanbaek Co. Ltd. on 25/09/2023.	Route survey, tower spotting and mobilization ongoing.	31/12/2025	CSEMP of package 1 was submitted by contractors and PMU has raised some comments and requested to submit the revised CSEMP (Annexure 38).
Package-2	Rampura- Bashundhara 132kV double circuit underground cable line: 9.5 km underground + 1.5 km overhead	Contract signed with JV of TBEA and TBEA Luneng on 16/10/2022. Details of this line is included in IEE Addendum-5.	Commissioned in June, 2025.	25/06/2025	Environmental monitoring carried out for Package 2 during reporting period and updated the monitoring result in Chapter 3
Package-3	Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing	Contract signed with L&T, India on 09/05/2021. Now	In Satkhira-Manirampur line, piling, piling cap and erection work have completed 114, 100 and 109 towers respectively out	30/06/2025	The contractor of package-3 submitted an

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	line, LILO of Rupsha Power Plant-Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km, Satkhira-Manirampur 132 kV double circuit line: 33 km, Kaliganj-Maheshpur 132 kV double circuit line: 28 km, Kushtia-Meherpur 132 kV double circuit line: 48 km, LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km, LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km, LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km	piling work and material procurement is ongoing. IEE addendum-1 (final) submission date: 23/08/2022 IEE addendum-2 (final) submission date: 13/10/2022 IEE addendum-3 (final) submission date: 30/03/2023 IEE addendum-4 submission (final) date: 13/12/2023 IEE addendum-5 (draft) submission date: 16/07/2024 Construction activity started: March 2022.	of 114 approved tower locations. 28.97 km of stringing has completed out of 33.19 km as of June 2025. - In Satkhira-Rupsha line, piling, piling cap and erection work have been completed for 186, 174 and 161 towers respectively out of 187 approved tower locations. 17.50 km of stringing have completed out of 62.20 km as of June 2025. - In Kushtia- Meherpur line, piling, piling, piling cap and erection work have been completed for 157, 156 and 139 towers respectively out of 159 approved tower locations. 25.07 km of stringing have completed out of 47.21 km as of June 2025. - In Kaliganj- Maheshpur line, piling, piling cap and erection work have been completed for 88, 88 and 88 towers respectively out of 88 approved tower and 26.02 km of stringing have completed out of 26.02 km as of June 2025 - About 85% of work has been completed by June 2025	Further extension will be issued after extension of project DPP time period	environmental monitoring report in April 2025 which was rejected by the PIU due to compliance issues. The contractor has appointed a new vendor and site data collection has been completed. At present lab analysis of the samples collected is ongoing. The report is expected to be submitted in Q3-2025 (Annexure 40).
Package-4	Purba Sadipur-Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km,	Contract signed with Transrail Lighting, India on	In Gopalganj-Shibchar line, piling, piling cap and erection work have been completed for 65, 62 and 60 towers	30/06/2025	Environmental monitoring carried out for Package 4

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line, LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation : 1 km, Niamatpur- Patnitola 132 kV double circuit line: 32.5 km, Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m Teesta River Crossing, Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.0 km Katcha River Crossing & 300m Bhairab River Crossing, LILO of Madaripur-Faridpur 132 kV double circuit line at Bhanga: 0.5 km, LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km	30/06/2021. Now piling work and material procurement is ongoing. IEE addendum-1 (draft) submission date: 18/04/2022 IEE addendum-1 (final) submission date: 23/08/2022 IEE addendum-2 (draft) submission date: 04/08/2022 IEE addendum-2 (final) submission date: 13/10/2022 IEE addendum-3 (draft) submission date: 10/10/2022 IEE addendum-3 (final) submission date: 30/03/2023 Construction activity started: March 2022.	respectively out of 81 Approved Locations and 13.04 km of stringing have completed as of June 2025. - In Purba Sadipur-Domar line piling, piling cap and erection work have been completed for 128,127 and 127 towers respectively out of 128 approved Location and 41.11 km of stringing have completed as of June 2025. - In Domar - Hatibandha line, piling, piling cap and erection work have been completed for 106, 102 and 99 towers respectively out of 107 approved locations and 28.49 km of stringing have completed as of June 2025. - In the Niamatpur-Patnitola line piling, piling cap and erection work have completed for 96, 77 and 71 towers respectively out of 96 approved locations as of June 2025. - Bagerhat-Pirojpur-Bhandaria line pile, pile cap and erection work have completed 157, 131 and 52 towers respectively out of 173 approved locations as of June 2025. - About 79.40% of work was completed by June 2025	Further extension will be issued after extension of project DPP time period	during reporting period and updated the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
Package-5	400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision)	Contract signed with China Electric Power Equipment and Technology (CET) Co. Ltd on 03/1/2022.	Land Filling has been substantially completed and civil work is ongoing at Kaliganj 400/230 kV substation as of June 2025	14/06/2026	Environmental monitoring carried out for Package 5 during reporting period and updated the monitoring result in Chapter 3
Package-6	400/230 kV Indoor GIS Substation: Purbachal with 3×750 MVA 400/230 kV transformer & 230/132 kV Indoor GIS Substation: Purbachal-2 with 2×350/450 MVA 230/132 kV transformer.	Contract signed with China Electric Power Equipment and Technology (CET) Co. Ltd on 03/1/2022.	Land Filling had been substantially completed and civil work is ongoing at Purbachal 400/230/132 kV substation as of June 2025	20/06/2026	Environmental monitoring carried out for Package 6 during reporting period and updated the monitoring result in Chapter 3
Package-7	230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer, Four	Contract signed with CMEC-CNEEC JV on 27/02/2022. IEE addendum-4 (draft) submission date: 13/12/2023. Construction started in March 2023.	Civil works at Rupsha, Phultola, Manirampur and Meherpur substations are ongoing. Land development is ongoing at Maheshpur and Satkhira. About 40% of the work was completed by June 2025.	30/06/2025 Further extension will be issued after extension of project DPP time period	Environmental monitoring carried out for Package 7 during reporting period and updated the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	nos. 132 kV AIS Bay Extension at Satkhira Substation, Two nos. 132 kV AIS Bay Extension at Kaliganj Substation, Two nos. 132 kV AIS Bay Extension at Bagerhat Substation & Two nos. 132 kV AIS Bay Extension at Kushtia Substation.				
Package-8	230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision), 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer, Two nos. 132 kV AIS Bay Extension at Patnitala	Contract signed with Energypac-CSEPD Consortium on 23/06/2022.	The contract has been terminated and effective from 27/05/2024. Rebidding is under process.	--	

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	Substation, Two nos. 132 kV AIS Bay Extension at Niamatpur Substation, Two nos. 132 kV AIS Bay Extension at Gopalganj Substation, Two nos. 132 kV GIS Bay Extension at Purba Sadipur Substation & Two nos. 132 kV GIS Bay Extension at Bhandaria Substation.				
Package-10	Procurement of Drones	Contract signed on 18/01/2024	Commissioned on 23/12/2024	31/12/2024	-
S-2	Consultancy for Drones Legislation implementation	Contract signed on 08/10/2021	-	31/12/2024	-
S-3	Consultancy for External Social Monitoring.	Contract signed on 15/03/2022	-	-	-

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Progress on implementation of environmental management activities and Package-wise environmental safeguards documentation status were mentioned in below table.

Table 1-3: Progress on implementation of environmental management activities

Activity	DWZTGEP Packages							
	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8
Monitoring and Reporting								
Monthly Report	x	x	x	x	x	x	x	N/A
Quarterly Report	x	√	√	x	√	√	√	N/A
Semi-annual Report	x	√	√	√	√	√	√	N/A
Baseline Environmental Quality Monitoring								
Air Quality	x	√	√	√	√	√	√	N/A
Noise Level	x	√	√	√	√	√	√	N/A
Surface Water Quality	x	√	√	√	√	√	√	N/A
Groundwater Quality	x	√	√	√	√	√	√	N/A
Soil Quality	x	√	√	√	√	√	√	N/A
Periodic Environmental Quality Monitoring								
Air Quality	X	√	X	√	√	√	√	N/A
Noise Level	X	√	X	√	√	√	√	N/A
Surface Water Quality	X	√	X	√	√	√	√	N/A
Groundwater Quality	X	√	X	√	√	√	√	N/A
Soil Quality	X	√	X	√	√	√	√	N/A

Table 1-4: Package-wise environmental safeguards documentation status

Package	CESEMP Approved by PMU (Yes/No)	IEE/Addendum of IEE prepared (Yes/No)	Disclosed On project website (Provide weblink)	Remarks
1	No	No		The contractor submitted the CSEMP for Package 1; however, the PMU reviewed the document, provided comments, and requested a revised version (Annexure 38).
2	Yes	Yes	https://erp.powergrid.gov.bd/w/esia_reports/show_esia_reports	
3	Yes	Yes		
4	Yes	Yes		
5	Yes	Yes		
6	Yes	Yes		
7	Yes	Yes		
8	No	No		Contract terminated, retender initiated

2 COMPLIANCE TO NATIONAL REGULATIONS

7. The Environment Conservation Act of 1995 establishes the requirement for an environmental assessment in Bangladesh. Any proposed "industrial unit or project" must obtain prior approval from the Department of Environment (DoE). The act has classified projects to be assessed by the DoE in four categories (Green, Yellow, Orange and Red). Electrical infrastructure projects involving transmission lines longer than 25 km are categorized as 'Red' category, which triggers an automatic requirement for an IEE. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and was valid till 28/07/2025.
8. Land acquisition for substations is done in accordance with the Acquisition and Requisition of Immovable Property Act, 2017 according to which the DC of the respective district determines the compensation amount for lands to be acquired as well as trees, crops, vegetation etc. situated in that land. The Project office deposits the money to the DC who is authorized by law to distribute the compensation amount among the affected people. Under the DWZTGE Project, 79.6 acres of land in 15 places has been acquired and compensation amount for all of the acquired sites as determined by the DC has been deposited by the project office. In all cases, all the people concerned have been notified properly as per the requirements of the law and the project office has deposited the compensation amount as determined by the DC.
9. During the construction of transmission lines, losses to the vegetation and plants are inevitable. The owners concerned are compensated as per rates provided by the local agriculture office. Project office has collected the rates from the local agricultural offices. Also, the transmission lines will cross several water bodies for which permission from Bangladesh Interim Water Transport Authority (BIWTA) has been obtained.

Table 2-1: Compliance with ECC Requirements

SI No	ECC Requirement	Compliance Status	Remarks
1	The activity under this Project shall not result in the loss of the loss of containment of any materials that would affect health or will have a damaging impact on the environment or natural resources.	Complied	All harmful material is being contained and disposed properly.
2	Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed Transmission Pipeline construction program.	Complied	Proper sanitation has been ensured by the respective contractors.
3	No solid waste can be burnt in the project area. An environmentally friendly solid waste management should be in place during whole the period of the project in the field.	Complied	No wastage is burnt. All the waste/ excess material is collected and recycled/ disposed of properly.
4	Proper and adequate on-site precautionary measures and safety measures should be ensured so that no habitat of any flora and fauna would be demolished or destructed.	Complied	No habitat of any fauna is harmed. However, there are some losses to the flora during the construction phase for which proper compensation to the owners has been ensured. Furthermore, tree plantation plan has been prepared to comply with the 1:3 planting ratio.

SI No	ECC Requirement	Compliance Status	Remarks
5	All the required mitigation measures suggested in the EMP report along with the emergency response plan are to be strictly implemented and kept operative/ functioning on a continuous basis.	Complied	EMP is a part of the contract for every contractor and is being followed strictly.
6	To reduce dust, spraying of water over the earthen materials should be carried out from time to time.	Complied	Water is being sprayed on stored construction material to avoid dust generation.
7	Resettlement plan should be properly implemented, and people should be adequately compensated.	Complied	Proper compensation has been ensured.
8	After the construction work, topsoil should be properly restored. No wetland should be filled up.	Complied	No wetland is being filled up. Topsoil has been transferred to nearby agricultural lands.
9	Construction material should be properly disposed of after the construction work is over.	Complied	Construction waste is being properly collected and disposed of by the support of respective municipal authority.
10	As described in the report, environmental monitoring should be strictly followed, and monitoring report should be shared with DOE to ensure the environmental management properly.	Complied	The monitoring report is being shared with DoE annually during renewal of the ECC.
11	At the time of commissioning of the Transmission line and other facilities, utmost precautionary measures should be taken to reduce the possibility of accident.	Will be complied	Public announcement will be made before electrically charging any facilities.
12	The Environmental Management Plan (EMP) included in the EMP Report shall strictly be implemented and kept functioning on a continuous basis.	Complied	EMP is a part of the contract for every contractor and is being followed strictly.
13	In case of any emergency, the following information shall immediately be reported to Headquarter of the Department of Environment (DOE) simultaneously. a. Nature of incidents (fire, accident. collision, etc.) b. Personnel affected (injured, missing, fatalities, etc.) c. Emergency support available and its location (standby transport, medical facilities, etc.) d. Weather conditions e. Current operations (abandoning the site. firefighting. etc.)	Will be complied	Will be reported in case of any emergency.

SI No	ECC Requirement	Compliance Status	Remarks
14	All pollution incidents shall be reported immediately and simultaneously to the nearby Office of the Department of Environment.	Will be complied	Will be reported in case of any incident.
15	Full and adequate utilization of the techniques for mitigation of pollution and environmental damage as well as that for treatment of wastes shall be ensured.	Complied	Pollution and environmental damage measures have been ensured.
16	On completion of the Transmission line and other construction. The project authority shall hand-over and leave the land to the actual landowner in a replenished condition in terms of fertility and topography.	Will be complied	Land will be handed over to the landowners after commissioning of transmission lines in a ready-to-cultivated condition.
17	All parameters of effluent, gaseous emission, noise, solid waste, hazardous waste etc. shall be within the limits in the Environment Conservation Rules (ECR), 2023. In case of non-coverage of ECR, the World Bank Environment, Health and Safety Guideline shall be adhered to.	Complied	Adherence to the relevant standard being ensured.
18	Rehabilitation of human settlement or compensation for any sort of activity which will incur damage or loss of public or private property, or any natural resources shall be addressed as per Government of Bangladesh rules and regulations	Complied	Govt. rules are being followed.
19	No activity of cutting/razing/dressing of hill or hill land is endorsed under this clearance without due permission/clearance of the concerned authority of the Government of Bangladesh.	Complied	The project's geographic locations do not have any hills.
20	Appropriate permission would be required to obtain from the forest department in favor of cutting/felling of any plant/tree/sapling forested by any individual or government before doing such type of activity.	Will be complied	Permission will be requested whenever there is any such requirement.
21	Power Grid Company of Bangladesh Ltd (Power Grid) shall extend active cooperation to DOE officials to facilitate their visit to the site as and when necessary.	Complied	DoE officials are always welcomed to visit sites and offices.

2.1 Compliance with Environmental Covenants from the ADB Loan Agreement

10. Environment: Power Grid complies with (a) all applicable laws and regulations of ADB relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures and

requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.

11. Land Acquisition and Involuntary Resettlement: Power Grid is complying with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures, and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report. Under this project, land that is only used for cultivation in the dry season is being acquired. Therefore, there is no resettlement under this project.
12. Tribes, Minor Races, Ethnic Sects and Communities: Power Grid ensures that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts.
13. Safeguards Related Provisions in Bidding Documents and Works Contracts: Bid documents of each package contain SCC Clause-47 which makes the EMP part of the contract (Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each and every package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (Annexure-5). Links to approved CESMPs of packages 2, 3, 4, 5, 6 and 7 are available in Annexure 4.
14. Labor Standards, Health and Safety: Power Grid has included specific provisions in the bidding documents and contracts financed by ADB under this Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors. These requirements are added in the bid document as SCC 22.2.7 and GCC 22.2 (Annexures 7 & 8).

Table 2-2: Compliance with Environmental Covenants

Schedule #, Para. #	Covenant	Compliance Status	Remarks
Schedule 4, Para. 10	<u>Environment</u> : The borrower shall or shall cause Power Grid to ensure that the preparation, design, construction, implementation, operation, and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures and requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied	Project preparation, design, construction, implementation, operation, and decommissioning are complying with all applicable laws and regulations.
Schedule 4, Para. 11	<u>Land Acquisition and Involuntary Resettlement</u> : The borrower shall or shall cause Power Grid to ensure that all rights-of-way required for the Project are made available to the Works contractor in accordance with the schedule agreed under	Being complied	Necessary RoW are being made available to the contractors as per work schedule following all

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	the related Works contract and all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report.		applicable laws and regulations. There will be no resettlement under this project and the requirements of RP and safeguard reports are being followed properly.
Schedule 4, Para. 12	Without limiting the application of the Involuntary Resettlement Safeguards or the RP, the borrower shall or shall cause Power Grid to ensure that no physical or economic displacement takes place in connection with the Project until: (a) compensation and other entitlements have been provided to affected people in accordance with the RP; and (b) a comprehensive income and livelihood restoration program has been established in accordance with the RP.	Being complied	This project will not require any resettlement.
Schedule 4, Para. 13	<u>Tribes, Minor Races, Ethnic Sects and Communities</u> : The borrower shall or shall cause Power Grid to ensure that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts. If the Project does have any such impact, the <u>borrower shall or shall cause</u> Power Grid to take all steps required to ensure that the Project complies with the applicable laws and regulations of the Borrower and with the SPS.	Being complied	This project will not have any impact on any Tribes, Minor Races, Ethnic Sects and Communities
Schedule 4, Para. 14	Human and Financial Resources to Implement Safeguards Requirements: The borrower shall make available or cause Power Grid to make available necessary budgetary and human resources to fully implement the EMP and the CAP.	Being complied	Both Power Grid and the contractors have human and financial resources to implement the respective responsibilities of EMP and CAP.
Schedule 4, Para. 15	<u>Safeguards Related Provisions in Bidding Documents and Works Contracts</u> :	Being complied	All the provisions are included in

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	The borrower shall or shall cause Power Grid to ensure that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures relevant to the contractor set forth in the IEE, the EMP, the CAP, and the RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report. (b) make available a budget for all such environmental and social measures. (c) provide the Borrower and Power Grid with a written notice of any unanticipated environmental, resettlement or tribes, minor races, ethnic sects and communities risk or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP. (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) reinstate pathways, other; local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.		bidding and contract documents.
Schedule 4, Para. 16	Safeguards Monitoring and Reporting: The Borrower shall do the following or shall cause Power Grid to do the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission. (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan.	Being complied	Submitting Semi Annual Safeguard Monitoring Report submitted to ADB. There was no unanticipated environmental and/or social risks and impacts occurred during construction

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	(c) no later than 90 days after the Effective Date, engage qualified and experienced external experts under a selection process and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process, and facilitate the carrying out of any verification activities by such external experts. (d) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP of the RP promptly after becoming aware of the breach.		
Schedule 4, Para. 17	Prohibited List of Investments The Borrower shall and shall cause Power Grid to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Being complied	Loan amounts are used only for payment of approved contract components.
Schedule 4, Para. 18	<u>Labor Standards, Health, and Safety:</u> The Borrower shall and shall cause Power Grid to ensure that the core labor standards and the Borrower's applicable laws and regulations are complied with during project implementation. The Borrower shall cause Power Grid to include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms. (b) do not use child labor. (c) do not discriminate against workers in respect of employment and occupation. (d) do not use forced labor. (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to	Being complied	Appendix-7 and 8

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	the employees of contractors Schedule engaged under the Project and to members of the local communities surrounding the Project area, particularly women.		
Schedule 4, Para. 19	The Borrower shall cause Power Grid to strictly monitor compliance with the requirements set forth in paragraph 17 above and provide ADB with regular reports.	Being complied	Monitoring of all relevant compliances in all project sites.

2.2 Compliance with Project Administration Manual (PAM)

15. Environment (category B): The project is classified as environmental category B as it is a transmission system improvement project, which will not pass through any ecologically sensitive area and will not bring significant adverse environmental impacts that are irreversible, diverse or unprecedented. An initial environmental examination (IEE) has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and GoB legislation. The project environmental impacts from overhead line, underground cable and substations have been adequately assessed and mitigation measures have been developed that are commensurate to the impacts in separate EMPs. Meaningful consultations were undertaken to reflect the opinions and views in alignment selection and impacts mitigation stages.
16. Climate Change: The climate change impact of the project is categorized as medium. Climate risk vulnerability assessment (CRVA) has been conducted and the CRVA results have been incorporated into the project design. In addition, the project contributes to climate mitigation by using high efficiency transmission lines.
17. Involuntary resettlement (category A): The substations have been carefully designed to be constructed in the lands that are used for cultivation only in the dry season. Therefore, there is no resettlement under this project. The overhead transmission lines have temporary impacts for crops and permanent impacts for trees and land under four tower legs. Underground lines will follow the right of way of existing roads without having resettlement impacts.
18. Indigenous Peoples (category C): - The project does not affect dignity, human rights, livelihood systems or culture and territories of Indigenous Peoples.
19. Gender and Social Dimensions: The project is categorized as having some gender elements. Under the PRC Fund grant for procurement of Drones, the project will directly support women's employment in the Drone Inspection Center in Power Grid. The project will also generate jobs for local communities during construction as a direct benefit. Further, contractors will carry out HIV/AIDS awareness activities for their laborers at work sites, which will be monitored by the construction supervision consultants. Power Grid will ensure that contractors adequately provide health and safety measures for the construction workers and further ensure that bidding documents include clauses on how contractors will address this, including an information and awareness raising campaign for construction workers on sexually transmitted diseases, including HIV/AIDS and human trafficking (see Annexures 7 & 8).

Institutional Setup of Power Grid for Implementation of EMP:

20. The contract Department of Power Grid is responsible for preparing the bid document, tender invitation, bid evaluation and contract award. They have ensured the inclusion of relevant EMP clauses in the bid document of each and every package which has been reviewed and confirmed by ADB. During implementation of the project, the PIU is responsible for overall supervision, monitoring, reporting and enforcing the EMP through the implementing contractors. Setup of the

PIU is attached as Annexure-13. Power Grid's Social and Environmental Unit (ESU) will provide internal expertise support while Power Grid appointed consulting firm (EQMS Consulting Ltd.) will provide the external expertise required for the overall implementation of the EMP.

Table 2-3: Safeguard personnel in DWZTGE

Project Implementing Bodies	Name	Designation	Email Address	Contact Number	Roles
1. Power Grid	Md. Abul Kashem	Project Director	Pd.dwztgep@pgcb.gov.bd	01709997858	Primary Contact Person
	Rezwan Ahmed Khan	Sub-Divisional Engineer	Rezwan07.pgcb@gmail.com	01708465492	Alternate Officer
2. Consultant	Abdul Halim	Team leader	abdul.halim@eqms.com.bd	01719708440	Supervision and review
	Sadman Khaled Monsur	Deputy Team Leader	sadman.monsur@eqms.com.bd	01711373678	Supervision and review
	Mehedi Hasan	Coordinator and Social Expert	hasan.mehedi@eqms.com.bd	01719216910	Reporting and Monitoring
	Sk Abid Md Saad	Environmental Officer	abid.saad@eqms.com.bd	01675269970	Reporting and Monitoring
3. Contractors	Faizur Rabbee	EHS Officer (P-2)	rabbeeFaizur@gmail.com	01723656048	Primary Contact Person
	Anoop A T	EHS Officer (P-3)	anoopat@Intecc.com	01715251106	Primary Contact Person
	Arnab Kumar Mitra	Project Manager (P-4)	arnab.mitra@transraillighting.com	01316709382	Primary Contact Person
	Sohel Rana	EHS Officer (P-5 and 6)	sohelranaeee76@gmail.com	01743883846	Primary Contact Person
	Ge Wenbo	Project Manager (P-7)	gewenbo@cneec.com.cn	01922360325	Primary Contact Person

2.3 Grievance Redress Mechanism

21. GRM is a locally based, project-specific way to deal with and resolve complaints and grievances faster and thus enhance project performance standards in terms of environmental, social and resettlement management. The fundamental objectives of the GRM, implemented through a Grievance Redress Committee (GRC) are to resolve any environmental and resettlement related grievances in consultation with the aggrieved party to facilitate smooth implementation of environmental and resettlement plans and establish accountability of the affected people.
22. A GRC (Annexure-7) is formed to receive and resolve complaints as well as grievances from the aggrieved people from the local stakeholders including the Project-affected people. Based on consensus, the GRC will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal actions. The procedure will, however, not prevent a person's right to go to the courts of law.
23. The established GRC will function throughout the life cycle of the project implementation and Power Grid will ensure its accessibility to affected parties and transparency and efficiency in grievance resolution. However, it will not deal with or interfere with any matters which are already placed before the country's courts of law. The Project will provide publicity for the GRC established using a variety of media such as brochures and leaflets printed in Bengali and through community level awareness raising programs.

24. Contractors of packages 2, 3, 4, 5, 6, and 7 have set up signboards/banners in every construction site which lets the people know about the ongoing activities. Complain logbooks are made available at each site. Power Grid and EQMS Ltd., the consultant, arranges regular formal/informal discussion sessions with the local mass to inform them about the GRC and know how people are feeling about the ongoing construction activities. The general vibe among the common people is very positive and they are eager to experience better-quality electricity in their area. EQMS has distributed leaflets within the vicinity of the construction areas in order to make people aware of the GRC.

As of now no issue regarding grievances has been raised to the GRC.

2.4 Compliance with Environmental Management Plan

25. EMP has been prepared for the substation and transmission line subprojects. It describes the anticipated impacts, monitoring requirements, and development of mitigation measures with respect to the following stages: (i) pre-construction, (ii) construction, and (iii) operation and maintenance. Detailed, site-specific mitigation measures and monitoring plans are developed and are being implemented throughout the project implementation phase.
26. EMP for the project identifies feasible and cost-effective mitigation and remediation measures to be taken to reduce potential significant, adverse impacts to acceptable levels. Here, proper mitigation measures are proposed for each potential impact, including details of responsible parties for implementation of the mitigation measures and the associated monitoring program.
27. Environmental monitoring reports are being submitted to ADB on a semi-annual basis during construction phase, while on an annual basis during operation by Power Grid. If any of the safeguard requirements that are covenanted in the legal agreements are found not to be satisfactorily complied, an appropriate corrective action plan (CAP) will be developed and implemented as agreed upon with ADB to rectify unsatisfactory safeguard compliance.

28. EMP for substations and Transmission line are mentioned in Table 2-4 and Table 2-5.

Table 2-4: EMP for substations

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
Land acquisition/ requisition	No site development activities were initiated before land acquisition or requisition.	The landowner was getting paid before the land acquisition	Complied	Before land acquisition, any kind of site development activities should be prohibited
Topsoil	Secondary containers are available and used to prevent spillage on the ground.	Chemical spills should be avoided	Being Complied	The secondary container should be used properly
Cutting of trees/Clearing of vegetation	Tree plantation will be done after completion of construction activities	No major trees were found on the site	Being Complied	Green belt and garden will be developed in operation phase
Construction waste	Waste is collected by Municipal Waste collector from the site	Waste should be disposed in proper segregation manner	Being Complied	Waste should be disposed in a segregation manner and removed by the proper authority
Drainage congestion and flooding	Substation FGL will be 500mm higher than the HFL.	No major issues regarding drainage congestion and flooding were not found	Complied	Surface height should be more than local and regional flood level
Noise level	Contractor using new machinery and carrying out proper maintenance of the equipment	Advance machineries should be used	Being Complied	Proper maintenance of the machineries
Air quality and dust	Vehicular movement over 20 km speed is strictly prohibited and well maintained at the site.	Spraying water during construction phase	Complied	Vehicular movement should not exceed more than 20 km per hour
Soil quality	Secondary container will be used to prevent oil spillage from machines and oil container	Chemical and oil spillage should be avoided	Being Complied	To prevent the spillage of hazardous and non-hazardous materials, such as transformer oil and PCBs, retrofitting of proper impermeable bunds and secondary

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
				containers should be used under all chemical and oil drum
Sitting of construction camps	Proper sanitation is well maintained at labor and construction site	Safe drinking water, food, first aid and fire safety equipment should be available	Complied	Proper sanitation should be maintained
Traffic congestion/road accident	Proper lighting, signal flag (during traffic movement) and safety tapping (around the construction equipment and materials) are well maintained in every site where site development and construction activities initiated	Congestion can be avoided by proper distribution of traffic scheduling	Being Complied	Proper lighting, signal flag and safety tapping should be used in excess road and site
Pollution due to Wastes	Waste is collected by Municipal Waste collector from the site	All types of waste should be stored in segregated manners (Waste inventories are depicted in (Annexure 21)	Being Complied	All types of stored waste should be removed regularly
Community H&S	Traffic movements are controlled through proper scheduling and limited speed	Regular monitoring of excess way	Being Complied	Excessive Traffic movement at a time should be avoided
Occupational H&S	During pre-work briefing PPE ensured for the workers and also monitored during the work activities by HSE concern of contractors	All types of PPE should be available for workers	Being Complied	Using PPE should be monitored strictly in project site
Physical cultural resources		Not required	Not required	Not required
Employment generation/income	Local manpower hired and trained for the certain activities.	Privilege should be given to the local community while recruiting	Being Complied	Provide proper training to the recruited manpower.

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
				Local vehicles are being hired for movement of man, machine and material.

Table 2-5: EMP for Transmission Lines

Item	Implemented Mitigating Measures	Implemented Mitigating Measures	Compliance Status	Action to be Taken
Tree felling/ Clearing of vegetation	Owners to be properly compensated	Compensation for land requisition and clearing for vegetative are well disbursed to the owner (Annexure-8)	Being complied	Owners to be properly compensated
Requisition of Land	Landowners must be notified and properly compensated.	No land is being acquired for transmission lines. For tower erection, landowners are being compensated as per law.	Being complied	Landowners must be notified and properly compensated.
Fauna (wildlife)	Owners to be properly compensated	The compensation to local people is being handed over by the contractor which will be reimbursed by Power Grid	Being complied	Owners to be properly compensated
Construction Waste	To be removed from the site by the Contractor for proper disposal	Construction debris and other waste (Plastic, paper, etc.) are safely removed from the site regularly (Annexure-21)	Being complied	To be removed from the site by the Contractor for proper disposal
Noise level	Noise generation to be kept at a minimum level not to disturb the local community.	All types of construction work and vehicular movement shut down after 5 pm.	Being complied	Noise generation to be kept at a minimum level not to disturb the local community. Regular maintenance should be done that any of the machines or equipment do not cause any additional noise.

Item	Implemented Mitigating Measures	Implemented Mitigating Measures	Compliance Status	Action to be Taken
Air quality and dust	Dust generation to be kept at a minimum level to ensure air quality	Construction materials are covered properly, and frequent spraying of water is well maintained in dry season (Annexure-10)	Being complied	Dust generation to be kept at a minimum level to ensure air quality
Soil quality	Prevention of Spillage and leakage of liquid at tower sites	Secondary containers are used to avoid oil and chemical spillage	Being complied	Prevention of Spillage and leakage of liquid at tower sites
Siting of construction camps (if needed for tower construction)	Consent from landowners is required, proper compensation to be provided and the surrounding environment to be protected.	Proper consent is taken from the owners, and compensation is reimbursed for the owners.	Being complied	Consent from landowners is required, proper compensation to be provided and the surrounding environment to be protected.
Traffic congestion/ road accident	Traffic congestion to be controlled to avoid any traffic accident	Traffic movement and speed are controlled properly by the flag man	Being complied	Traffic congestion to be controlled to avoid any traffic accident
Pollution due to wastes	Solid waste to be properly cleared off.	Contractors remove wastes from all the site before leaving	Being complied	Solid waste to be properly cleared off.
Community H&S	Safety barriers and warning signs surrounding tower construction sites	Safety signs are available at all sites (Annexure-22)	Being complied	Safety barriers and warning signs surrounding tower construction sites
Occupational Health and Safety	Health and Safety measures for the construction workers to be ensured	Proper PPE and Safety signs are ensured at the construction sites (Annexure-11)	Being complied	Health and Safety measures for the construction workers to be ensured
Employment generation/ income	Employ local people, especially PAPs, for the tower construction activities as much as possible.	Local people and vehicles are being hired as much as possible	Being complied	Employ local people, especially PAPs, for the tower construction activities as much as possible.

2.5 Tree Plantation Status

29. In the original IEE, it was highlighted that the IEE (Table 5-12) had estimated the removal of 22,378 trees for the construction of new and LILO transmission lines based on a 2018 inventory. However, representatives from the PIU, ESU, and EQMS unanimously agreed that the actual number of trees to be removed will be significantly lower due to several key factors. These include the reduction in project scope under Packages 1 and 2 (with 18 km of 400 kV and 4.5 km of 230 kV lines descope), the majority of transmission line alignments passing through paddy fields, and changes in ground conditions since 2018. Additionally, the IEE had considered all trees above 5 meters for removal, whereas the Electricity Rules 2020 require clearance of only 4.6 m for 230 kV and 3.8 m for 132 kV lines, further reducing the need for tree removal.
30. In Package 3, during the reporting period about 500 trees have been removed as of June 2025. Although, some voluntary tree plantation initiated in Package 3 during previous reporting semesters which are not a part of the tree plantation plan. Tree plantation for package 7 will be initiated after the construction of the substations. A comprehensive Tree Plantation Plan for Package 3 has been prepared and submitted to ESU for review and Package 2, 4, 5,6 and 7 will be incorporated after receiving the total inventory of tree species cut down from EPC contractor.

Table 2-6: Details of compensatory tree planation program as of Jan- Jun 2025

Package	Tree plantation plan (TPP) prepared (Yes/No)	No. of trees planned to cut	Trees planned to replant as per TPP	No. of trees removed (as of June 25)	Trees planted (as of June 25)	Types of species planted	Plantation completion status	Survival status	Remarks
Package- 1	NA	NA	NA	NA	NA	NA	NA	NA	
Package-2	NA	NA	NA	NA	NA	NA	NA	NA	No tree removal was necessary as the line was installed underground.
Package-3	NA	4952 (Tentative)	14856	500	500	Fruit bearing/ Medicinal Plants (Tree species)	Aug-25 to March 2026	NA	

Package	Tree plantation plan (TPP) prepared (Yes/No)	No. of trees planned to cut	Trees planned to replant as per TPP	No. of trees removed (as of June 25)	Trees planted (as of June 25)	Types of species planted	Plantation completion status	Survival status	Remarks
Package-4	NA	9500 (Tentative)	28500	0	NA	Fruit bearing/ Medicinal Plants (Tree species)	Aug-25 to March 2026	NA	
Package-5	NA	NA	NA	NA	NA	NA	NA	NA	Acquired substation land, no tree removal required
Package-6	NA	NA	NA	NA	NA	NA	NA	NA	
Package-7	NA	NA	NA	NA	NA	NA	NA	NA	
Package-8	NA	NA	NA	NA	NA	NA	NA	NA	

3 ENVIRONMENTAL QUALITY MONITORING

During this reporting period, periodic environmental monitoring was conducted in Package 2, 3³, 4, 5, 6 and 7. Monitoring was conducted for Air, noise, surface water, groundwater and soil in project areas. Details of the monitored environmental aspects were presented in the below sections.

3.1 Air Quality

31. This section identifies the status of the ambience air quality in the Package 2, 4, 5, 6 and 7 project locations. In these areas, ambient air quality is dependent on many factors like air movement, traffic volume, congestion, emissions from motor vehicles, and suspended dust particles. A continuous monitoring scheme is essential to evaluate air quality and for the development of any plan for mitigation of health risks caused by polluted air. During the monitoring period particulate matter (SPM, PM₁₀, PM_{2.5}), SO₂, NO₂, CO, Pb, O₃, SO_x and NO_x were monitored to compare with the baseline.

3.1.1 Air Quality Monitoring Locations

32. Air quality monitoring samples has been monitored for a defined time interval and from different sampling points within project areas (Table 3-1) of transmission line alignment (Package 2 and 4) and substation (Package 5, 6 and 7) locations. Air quality analysis results presented in Table 3-2. Monitoring photos shown in **Appendix 33**.

Table 3-1: Air Quality Measurement Locations and Descriptions

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
Package 2				
Rampura- Bashundhara 132kV Underground Cable Line				
1.	AQ1	23.81644N 90.43622E	Near the Substation Area in Bashundhara Residential Area	28.04.2025- 29.04.2025
2.	AQ2	23.79979N 90.44887E	Near United International University (UIU) Mosque	
3.	AQ3	23.76667N 90.43124E	Near the Substation Area of Aftabnagar	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
4.	AQ4	23°17'5.39"N 90°1'32.03"E	T-2/0	03.05.2025- 07.05.2025
5.	AQ5	23°17'55.37"N 90°2'29.59"E	T-4/0	
6.	AQ6	23°18'4.91"N 90°2'57.73"E	T-5/0	
7.	AQ7	23°19'46.89"N 90°10'35.89"E	T-15/0	
8.	AQ8	23°21'7.46"N 90°11'4.27"E	T-17/0	

³ The contractor of package-3 submitted an environmental monitoring report in April, 2025 which was rejected by the PIU due to compliance issues. The contractor has appointed a new vendor and site data collection has been completed. At present lab analysis of the collected samples are ongoing. The report is expected to be submitted in Q3-2025 (Annexure 40).

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
Purba Sadipur- Domar TL				
9.	AQ9	25°45'12.57"N 88°40'45.99"E	T-1/0	21.05.2025- 25.05.2025
10.	AQ10	25°51'37.67"N 88°43'50.66"E	T-8/0	
11.	AQ11	25°57'28.54"N 88°45'29.11"E	T-16/0	
12.	AQ12	26° 0'26.82"N 88°45'48.31"E	T-20/0	
13.	AQ13	26° 5'6.73"N 88°47'20.49"E	T-25/0	
Niamatpur- Patnitola TL				
14.	AQ14	25°47'24.11"N 88°41'21.95"E	T-3/0	15.05.2025- 19.05.2025
15.	AQ15	25°52'9.21"N 88°45'24.23"E	T-9/0	
16.	AQ16	25°54'37.92"N 88°45'26.28"E	T-12/0	
17.	AQ17	25°56'41.08"N 88°45'31.14"E	T-15/0	
18.	AQ18	25°57'39.67"N 88°45'34.17"E	T-17/0	
Gopalganj-Shibchar TL				
19.	AQ19	23°21'16.19"N 90°11'1.90"E	TT-2	09.05.2025- 13.05.2025
20.	AQ20	23°21'7.46"N 90°11'4.27"E	T-17/0	
21.	AQ21	23°19'46.89"N 90°10'35.89"E	T-15/0	
22.	AQ22	23°19'18.52"N 90°4'39.57"E	T-8/0	
23.	AQ23	23°17'5.39"N 90°1'32.03"E	T-2/0	
Domar-Hatibandha TL				
24.	AQ24	25°48'31.21"N 88°41'25.45"E	T-4/0	27.05.2025- 31.05.2025
25.	AQ25	25°52'46.24"N 88°45'49.71"E	T-10/0	
26.	AQ26	25°54'37.92"N 88°45'26.28"E	T-12/0	

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
27.	AQ27	25°57'28.54"N 88°45'29.11"E	T-16/0	
28.	AQ28	26° 0'26.82"N 88°45'48.31"E	T-20/0	

Package 5**400/230 kV GIS Substation at Kaliganj, Gazipur**

29.	AQ29	23.968956 N 90.549117 E	In front of Hafej Sheikh's House	14-06-2025- 15-06-2025
30.	AQ30	23.968956 N; 90.549117 E	Located Near Nolir Bridge	
31.	AQ31	23.963902 N; 90.549012 E	In front of Mamun Mia's House	
32.	AQ32	23.969834 N; 90.552915 E	In front of Late Abdul Razzak's House	

Package 6**400/230/132 KV GIS Substation at Purbachal**

33.	AQ33	23.864726 N; 90.475538 E	In front of Dulal Mia's house	18-05-2025- 19-05-2025
34.	AQ34	23.866024 N; 90.475774 E	In front of Dipak Chakraborty' s Shop	
35.	AQ35	23.862084 N; 90.476738 E	In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	
36.	AQ36	23.867947 N; 90.476117 E	In front of Mohadev Karmakar's house	

Package 7

37.	AQ37	22°55'28.14" 89°29'7.99"E	Near 132/33 kV GIS substation at Phultola	10.03.2025 - 12.03.2025
38.	AQ38	22°46'20.37"N 89°37'2.29"E	Near 230/132/33 kV GIS substation at Rupsha	
39.	AQ39	23°47'27.41"N 88°40'42.72"E	Near 132/33 kV GIS substation at Maheshpur	
40.	AQ40	23°20'39.43"N 88°55'27.94"E	Near 132/33 kV GIS substation at Meherpur	
41.	AQ41	22°58'35.71"N 89°13'44.30"E	Near 132/33 kV GIS substation at Manirampur	

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

3.1.2 Analysis Results

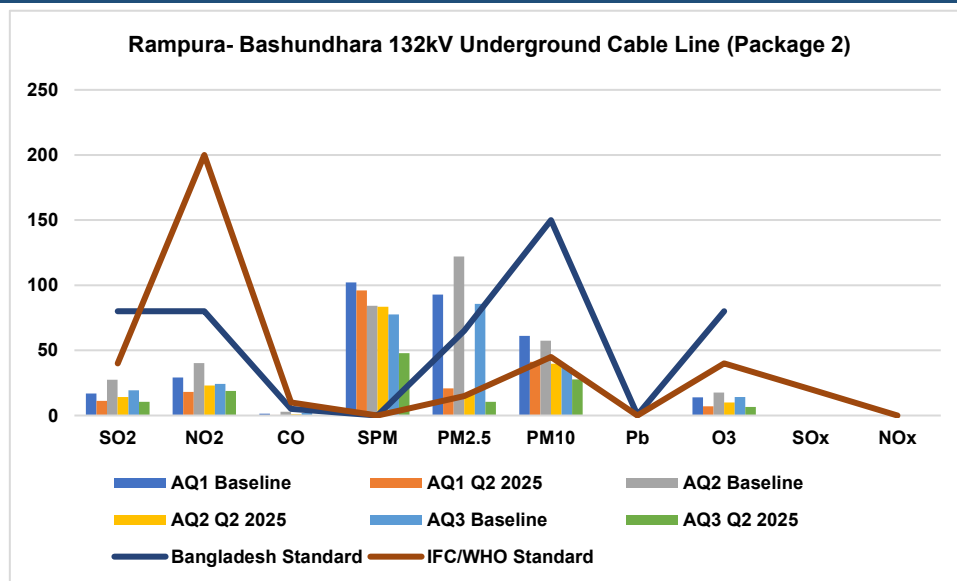
33. Air quality data was measured automatically every one minute and directly recorded onsite for measured parameters (SPM, PM10, PM2.5, SO2, NO2, CO, Pb, O3, SOx and NOx). Different analysis methods, such as Particulates 90° Infrared Light Scattering for particulate matters (SPM, PM10, PM2.5), electrochemical sensors for toxic gases (SO2, NO2, CO, O3, SOx and NOx) and

Atomic Absorption Spectroscopy (AAS) for Lead (Pb) are integrated into the device. Monitoring photographs and lab sheets are attached in **Annexure 32** and **Annexure 33**.

34. For Package 2, air quality monitoring was carried out at three locations (AQ1–AQ3) along the Rampura–Bashundhara underground cable corridor. The recorded PM10 concentrations ranged from 91.5 to 102.7 $\mu\text{g}/\text{m}^3$, and PM2.5 values ranged from 41.3 to 52.4 $\mu\text{g}/\text{m}^3$. These values were within the national standards of Bangladesh (150 $\mu\text{g}/\text{m}^3$ for PM10 and 65 $\mu\text{g}/\text{m}^3$ for PM2.5), but exceeded the IFC/World Bank guideline limits, which are 50 $\mu\text{g}/\text{m}^3$ for PM10 and 25 $\mu\text{g}/\text{m}^3$ for PM2.5. All other parameters SO_2 , NO_2 , CO, and O_3 were well below both national and international standards. These results suggest that while the ambient air complies with local regulations, there are elevated fine particulate levels that could impact workers and public health, likely caused by construction dust and local vehicular activities.
35. For Package 4, air quality was extensively monitored at twenty-five locations (AQ4–AQ28) across multiple transmission line alignments, including Gopalganj–Shibchar, Purba Sadipur–Domar, Niamatpur–Patnitala, Domar–Hatibandha, and Bagerhat–Pirojpur–Bhandaria. Across these sites, PM10 concentrations ranged from approximately 65 to 108 $\mu\text{g}/\text{m}^3$, and PM2.5 levels varied between 30 and 57 $\mu\text{g}/\text{m}^3$. While all results complied with the Bangladesh national ambient air quality standards, a significant number of locations exceeded IFC recommended limits for both PM10 and PM2.5, especially in semi-urban and roadside settings. On the other hand, gaseous pollutants such as SO_2 and NO_2 remained low, typically under 20 $\mu\text{g}/\text{m}^3$, and CO and O_3 concentrations were also minimal. These findings indicate that dust from construction, vehicle movement on unpaved roads, and dry soil conditions are the main contributors to elevated particulate levels, although no serious industrial pollution is present.
36. In Package 5, air quality was assessed at four locations (AQ29–AQ32) near the Kaliganj 400/230 kV GIS substation. The monitoring results showed that PM10 ranged from 72 to 96 $\mu\text{g}/\text{m}^3$, and PM2.5 ranged from 38 to 50 $\mu\text{g}/\text{m}^3$. These values are within the national standards, but once again, PM2.5 exceeded the IFC guideline limit at all locations. All other parameters, including SO_2 , NO_2 , CO, and O_3 , remained well within acceptable thresholds. The elevated particulate levels are likely due to site preparation and construction activities, particularly the movement of machinery and dry material handling. Despite this, the overall air quality does not pose immediate environmental health concerns under local standards, although mitigation measures such as water sprinkling and dust barriers are advisable.
37. For Package 6, four monitoring points (AQ33–AQ36) were established around the Purbachal 400/230/132 kV substation site. PM10 values at these locations ranged between 84 and 98 $\mu\text{g}/\text{m}^3$, while PM2.5 values were between 42 and 51 $\mu\text{g}/\text{m}^3$, exceeding IFC but staying well below national limits. Other pollutant levels such as SO_2 (below 12 $\mu\text{g}/\text{m}^3$), NO_2 (under 25 $\mu\text{g}/\text{m}^3$), and CO and O_3 also remained comfortably within acceptable levels. These results are consistent with early-phase construction activities in a newly urbanizing area like Purbachal, where dust generation is expected. The findings call for continued monitoring and dust control practices, particularly to reduce the health risks associated with prolonged PM2.5 exposure.
38. Lastly, Package 7 covered air monitoring at five locations (AQ37–AQ41) in substation areas at Rupsha, Phultola, Manirampur, and Meherpur. All recorded values for PM10, PM2.5, and other key pollutants were within national standards. PM2.5 and PM10 remained below 40 $\mu\text{g}/\text{m}^3$ and 90 $\mu\text{g}/\text{m}^3$ respectively, and gaseous pollutants such as SO_2 , NO_2 , and CO were found at very low concentrations. This indicates that the construction activities in these locations have not significantly deteriorated air quality, and the surroundings being more rural or vegetated help with natural dispersion of dust and pollutants. The monitoring confirms an overall good air quality condition in Package 7 sites with no exceedance of concern under either DoE or IFC guidelines.

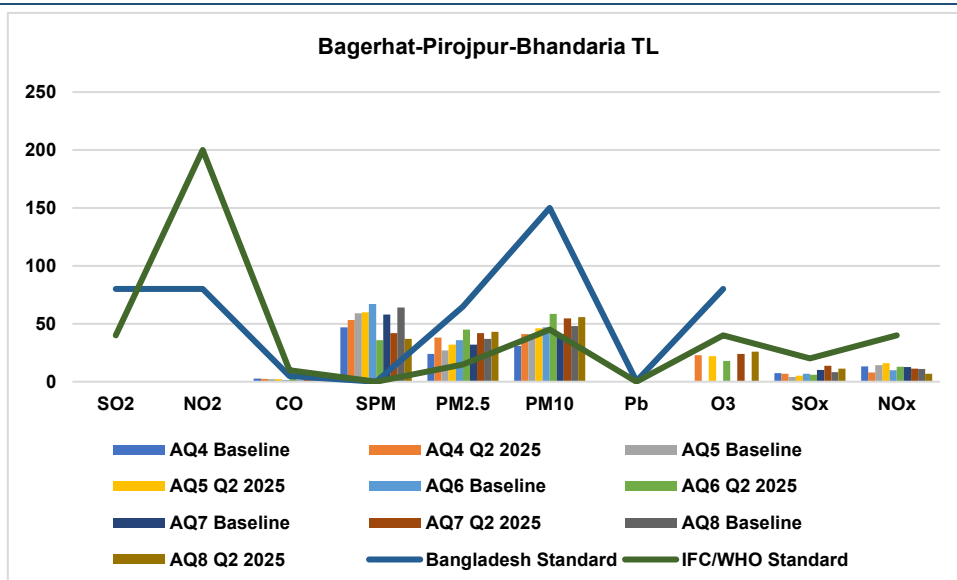
Figure 3-1: Air Quality Analysis Results in Package 2, 4, 5, 6 and 7 project locations

Package 2

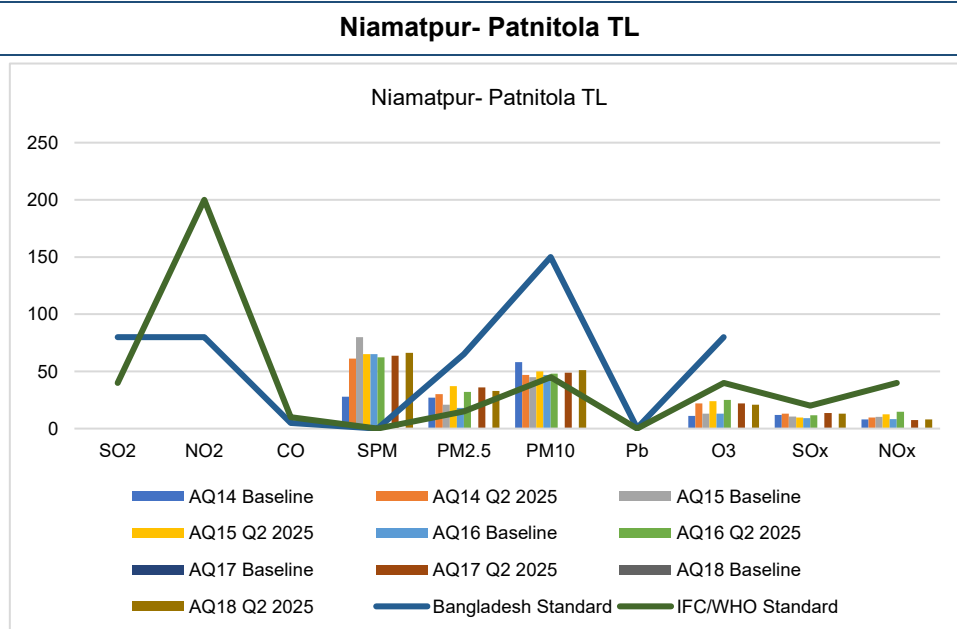
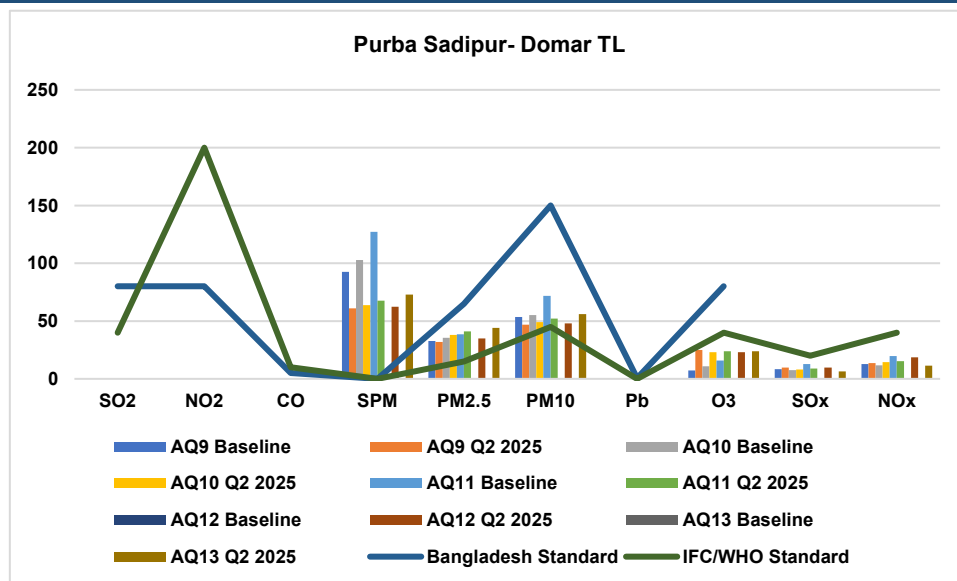


Package 4

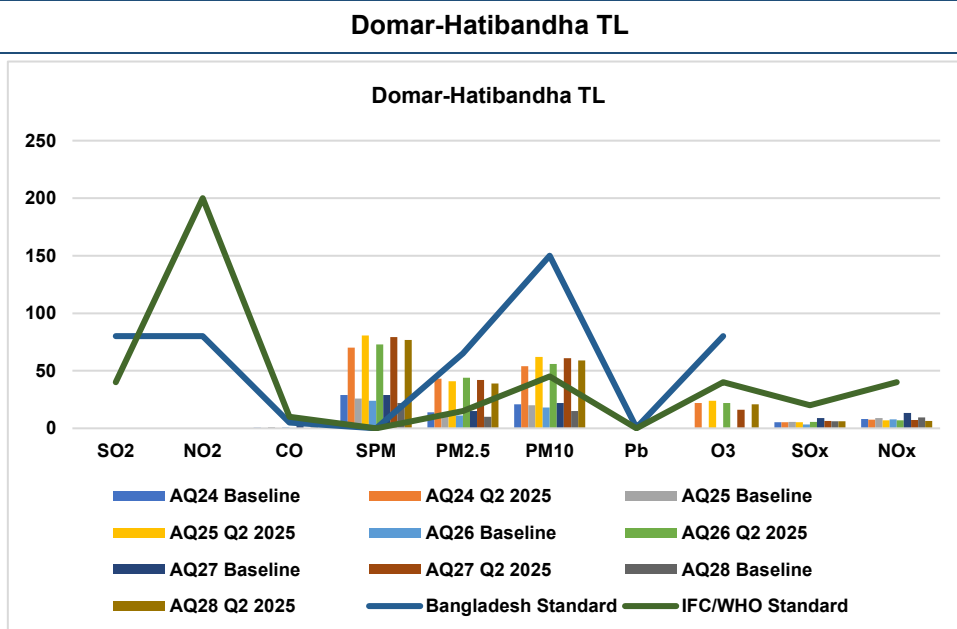
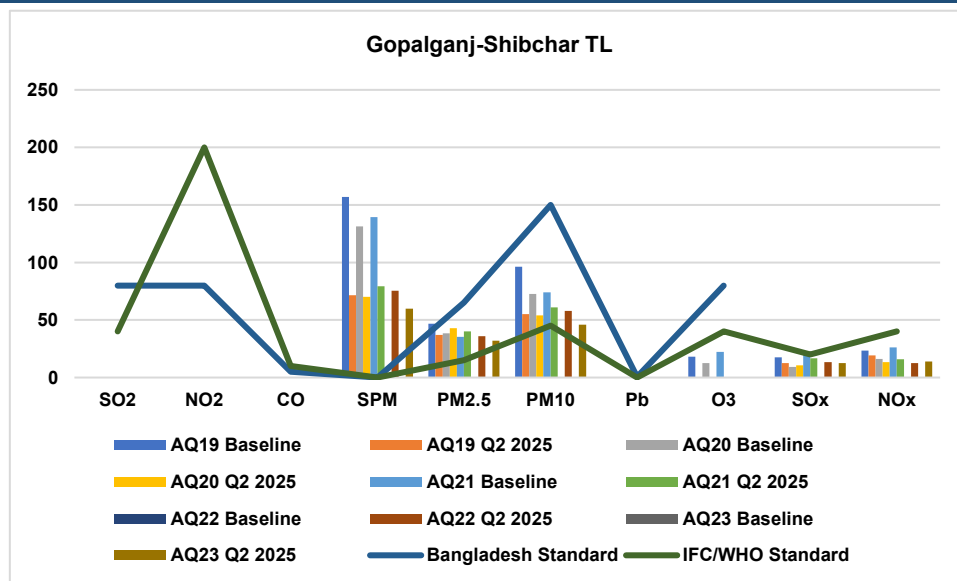
Bagerhat-Pirojpur-Bhandaria TL



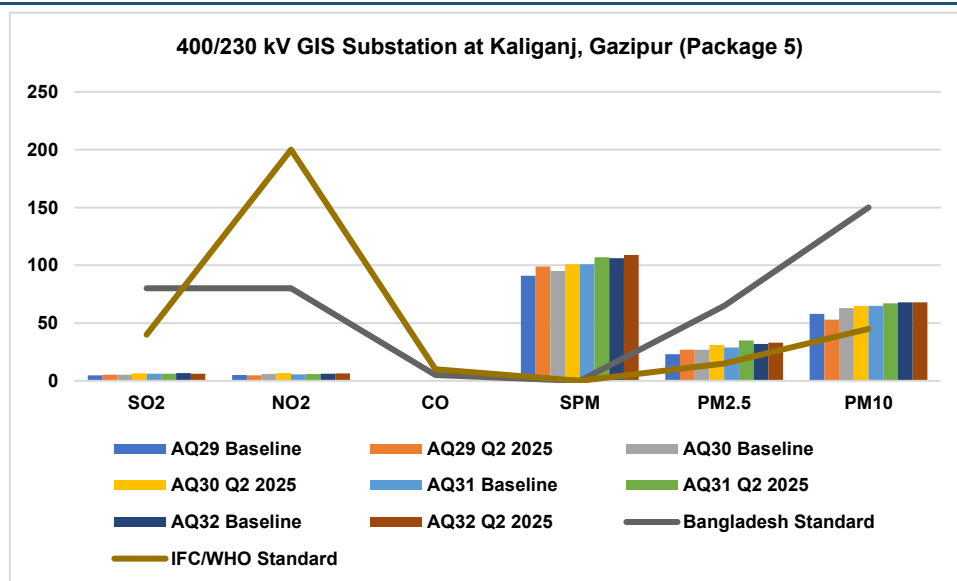
Purba Sadipur- Domar TL



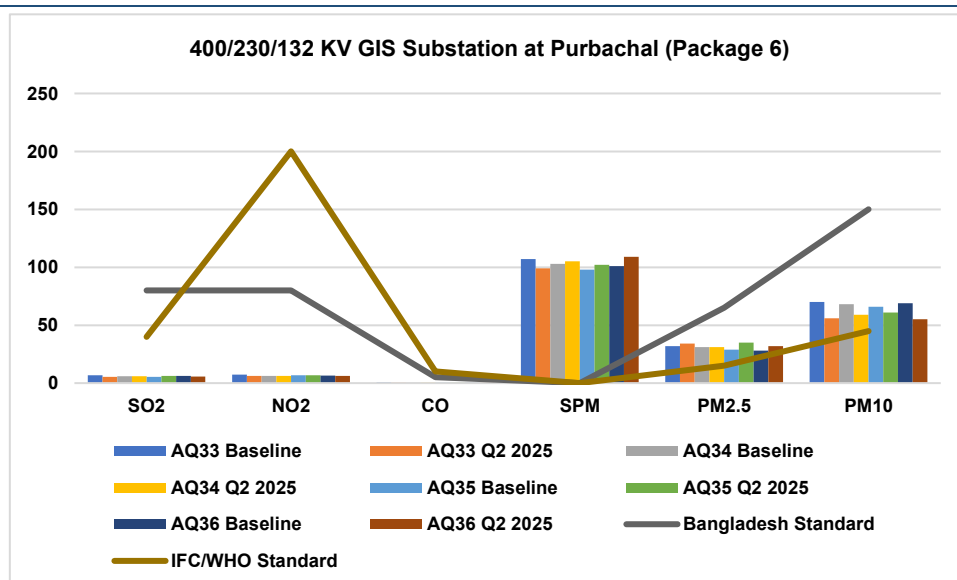
Gopalganj-Shibchar TL



Package 5



Package 6



Package 7

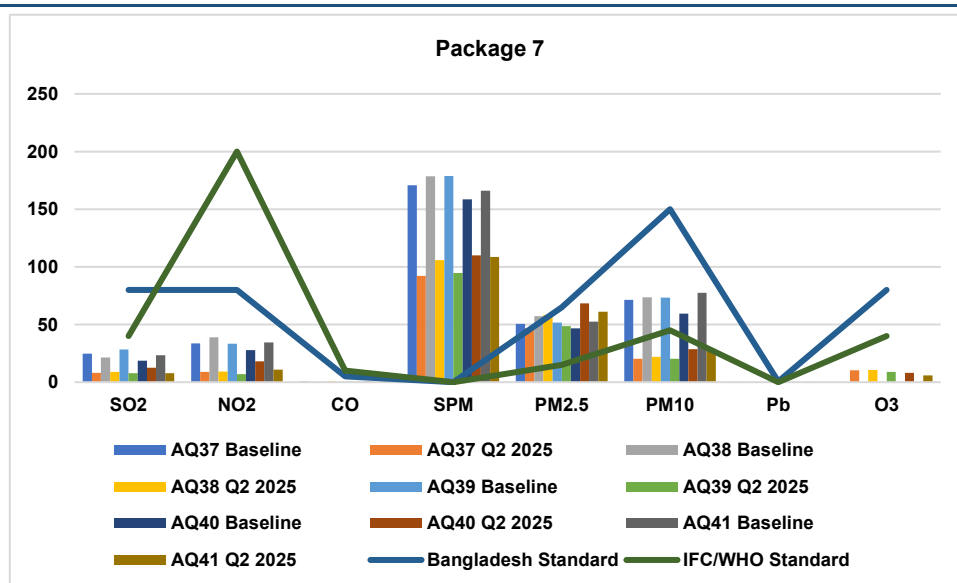


Table 3-2: Air Quality Analysis Results in Package 2, 4, 5, 6 and 7 project locations

Sl. No.	Code	Period	Ambient Air Pollution Concentration in µg/m3								SOx	NOx
			SO ₂	NO ₂	CO	SPM	PM _{2.5}	PM ₁₀	Pb	O ₃		
Package 2												
Rampura- Bashundhara 132kV Underground Cable Line												
1.	AQ1	Baseline	16.82	29.24	1.31	102.19	92.8	61.23	BDL	13.93	-	-
		Q2 2025	11.28	18.21	0.55	96.12	20.73	41.22	BDL	7.18	-	-
2.	AQ2	Baseline	27.49	40.23	2.86	84.25	122.1	57.43	BDL	17.56	-	-
		Q2 2025	14.28	23.11	0.82	83.38	17.22	39.73	BDL	9.97	-	-
3.	AQ3	Baseline	19.26	24.17	2.01	77.63	85.8	37.14	BDL	14.21	-	-
		Q2 2025	10.53	18.75	0.39	47.88	10.51	27.76	BDL	6.55	-	-
Package 4												
Bagerhat-Pirojpur-Bhandaria TL												
4.	AQ4	Baseline	-	-	2.7	47	24	31	0		7.3	13.1
		Q2 2025	-	-	2.4	53.3	38	41	0.0045	23	6.9	7.9
5.	AQ5	Baseline	-	-	2.1	59	27	41	0		4.2	14.2
		Q2 2025	-	-	2.3	59.8	32	46	0.0064	22	5.3	16.1
6.	AQ6	Baseline	-	-	1.3	67	36	47	0		6.8	9.8
		Q2 2025	-	-	2.4	69.6	45	58.5	0.0066	18	5.9	13.0
7.	AQ7	Baseline	-	-	1.1	58	32	41	0	-	10.1	12.6
		Q2 2025	-	-	2.3	62.5	42	54.6	0.0031	24	13.8	11.4
8.	AQ8	Baseline	-	-	2.4	64	37	48	0	-	8.3	11
		Q2 2025	-	-	2.1	61.6	43	55.9	0.0042	26	11.4	6.9
Purba Sadipur- Domar TL												
9.	AQ9	Baseline	-	-	0.4	92.5	32.8	53.4	BDL	7.2	8.4	12.9
		Q2 2025	-	-	0.3	61.1	32	47	0.002	25	9.8	13.5

Sl. No.	Code	Period	Ambient Air Pollution Concentration in µg/m3								SOx	NOx
			SO ₂	NO ₂	CO	SPM	PM _{2.5}	PM ₁₀	Pb	O ₃		
10.	AQ10	Baseline	-	-	0	102.8	35.4	55.1	BDL	10.9	7.6	11.6
		Q2 2025	-	-	0.3	63.7	38	49	0.020	23	8.1	14.6
11.	AQ11	Baseline	-	-	0.01	127.2	38.5	71.8	BDL	15.9	12.8	19.6
		Q2 2025	-	-	0.3	67.6	41	52	0.012	24	8.9	15.2
12.	AQ12	Baseline	-	-	-	-	-	-	-	-	-	-
		Q2 2025	-	-	0.3	62.4	35	48	0.002	23	9.8	18.6
13.	AQ13	Baseline	-	-	-	-	-	-	-	-	-	-
		Q2 2025	-	-	0.3	72.8	44	56	0.013	24	6.4	11.5
Niamatpur- Patnitola TL												
14.	AQ14	Baseline	-	-	0.001	28	27	58	0.01	11	11.8	8.1
		Q2 2025	-	-	0.4	61.1	30	47	0.0062	22	13.1	9.7
15.	AQ15	Baseline	-	-	0.001	80	21	45	0.02	13	10.4	10.3
		Q2 2025	-	-	0.4	65	37	50	0.0059	24	9.8	12.4
16.	AQ16	Baseline	-	-	0.001	65	18	47	0.01	13	9.1	8.3
		Q2 2025	-	-	0.3	62.4	32	48	0.0068	25	11.6	14.6
17.	AQ17	Baseline	-	-								
		Q2 2025	-	-	0.3	63.7	36	49	0.0036	22	13.7	7.3
18.	AQ18	Baseline	-	-								
		Q2 2025	-	-	0.3	66.3	33	51	0.0042	21	12.9	8.1
Gopalganj-Shibchar TL												
19.	AQ19	Baseline	-	-	0.02	156.8	46.9	96.2	BDL	18.1	17.6	23.5
		Q2 2025	-	-	0.4	71.5	37	55	0.0036		12.5	19.3
20.	AQ20	Baseline	-	-	0.01	131.4	38.4	72.5	BDL	12.5	9.2	16.1
		Q2 2025	-	-	0.4	70.2	43	54	0.0052		10.7	13.4

Sl. No.	Code	Period	Ambient Air Pollution Concentration in µg/m3									
			SO ₂	NO ₂	CO	SPM	PM _{2.5}	PM ₁₀	Pb	O ₃	SOx	NOx
21.	AQ21	Baseline	-	-	0.01	139.5	35.3	74.1	BDL	22.4	22.5	26.2
		Q2 2025	-	-	0.4	79.3	40	61	0.0071		16.8	16.0
22.	AQ22	Baseline	-	-								
		Q2 2025	-	-	0.4	75.4	36	58	0.0036		13.4	12.6
23.	AQ23	Baseline	-	-								
		Q2 2025	-	-	0.4	59.8	32	46	0.0062		12.6	14.0
Domar-Hatibandha TL												
24.	AQ24	Baseline	-	-	0.6	29	14	21	0	-	5.2	8.2
		Q2 2025	-	-	0.4	70.2	43	54	0.012	22	5.4	7.5
25.	AQ25	Baseline	-	-	1.2	26	13	20	0	-	5.5	8.9
		Q2 2025	-	-	0.4	80.6	41	62	0.014	24	5.2	7.0
26.	AQ26	Baseline	-	-	0.7	24	11	18	0	-	3.4	7.8
		Q2 2025	-	-	0.4	72.8	44	56	0.006	22	5.6	6.9
27.	AQ27	Baseline	-	-	1.9	29	15	22	0	-	8.8	13.4
		Q2 2025	-	-	0.3	79.3	42	61	0.002	16	6.4	7.1
28.	AQ28	Baseline	-	-	0.9	22	10	15	0	-	6.2	9.5
		Q2 2025	-	-	0.3	76.7	39	59	0.013	21	6.2	6.5
Package 5												
400/230 kV GIS Substation at Kaliganj, Gazipur												
29.	AQ29	Baseline	4.9	5.1	0.46	91	23	58	BDL	-	-	-
		Q2 2025	5.2	4.9	0.45	99	27	53	BDL	-	-	-
30.	AQ30	Baseline	5.3	6.0	0.51	95	27	63	BDL	-	-	-
		Q2 2025	6.5	6.8	0.53	101	31	65	BDL	-	-	-
31.	AQ31	Baseline	6.2	5.7	0.63	101	29	65	BDL	-	-	-

Sl. No.	Code	Period	Ambient Air Pollution Concentration in µg/m ³								SO _x	NO _x
			SO ₂	NO ₂	CO	SPM	PM _{2.5}	PM ₁₀	Pb	O ₃		
		Q2 2025	6.2	5.9	0.60	107	35	67	BDL	-	-	-
32.	AQ32	Baseline	6.8	6.2	0.59	106	32	68	BDL	-	-	-
		Q2 2025	6.1	6.5	0.51	109	33	68	BDL	-	-	-

Package 6**400/230/132 KV GIS Substation at Purbachal**

33.	AQ33	Baseline	6.7	7.2	0.59	107	32	70	BDL	-	-	-
		Q2 2025	5.4	6.1	0.45	99	34	56	BDL	-	-	-
34.	AQ34	Baseline	5.9	6.3	0.48	103	31	68	BDL	-	-	-
		Q2 2025	5.8	6.3	0.47	105	31	59	BDL	-	-	-
35.	AQ35	Baseline	5.4	6.7	0.51	98	29	66	BDL	-	-	-
		Q2 2025	6.1	6.7	0.49	102	35	61	BDL	-	-	-
36.	AQ36	Baseline	6.2	6.6	0.53	101	28	69	BDL	-	-	-
		Q2 2025	5.6	6.3	0.44	109	32	55	BDL	-	-	-

Package 7

37.	AQ37	Baseline	24.7	33.6	0.48	170.7	50.5	71.5	0.03	-	-	-
		Q2 2025	8.1	8.8	0.38	92.1	46.9	20.4	BDL	10.2	-	-
38.	AQ38	Baseline	21.4	38.8	0.41	178.6	57.2	73.5	0.04	-	-	-
		Q2 2025	8.9	9.1	0.75	105.7	58.3	22.1	BDL	10.5	-	-
39.	AQ39	Baseline	28.4	33.4	0.37	178.8	51.7	73.3	0.04	-	-	-
		Q2 2025	7.8	7.1	0.39	94.8	48.49	20.4	BDL	8.8	-	-
40.	AQ40	Baseline	18.6	27.9	0.18	158.5	46.7	59.5	0.01	-	-	-
		Q2 2025	12.6	18.2	0.7	109.9	68.2	28.5	BDL	8.2	-	-
41.	AQ41	Baseline	23.3	34.4	0.27	165.9	52.5	77.4	0.02	-	-	-
		Q2 2025	7.7	10.9	0.55	108.6	61.1	28.9	BDL	5.8	-	-

Sl. No.	Code	Period	Ambient Air Pollution Concentration in µg/m3									
			SO ₂	NO ₂	CO	SPM	PM _{2.5}	PM ₁₀	Pb	O ₃	SOx	NOx
Bangladesh Standard ⁴			80	80	5	-	65	150	0.5	80	-	-
**IFC/WHO Standard ⁵			40	200	10	NA	15	45	NA	40	20	40 (Annual)
Duration (Hours)			24 Hour	24 Hour	8 Hour	-	24 Hour	24 Hour	24 Hour	24 Hour	24 Hour	24 Hour

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

Note: BDL= Below Detection Limit, NA= Not available

⁴ Air Pollution (Control) Rules, 2022, Schedule 1: Ambient Air Quality Standards

⁵ WHO Ambient Air Quality Guideline Values (2005 and 2000), which are also being referred in the World Bank and IFC's General EHS Guidelines (2007). BDL-Below Detection level

3.2 Noise Level Quality

3.2.1 Noise Level Monitoring Methods

39. This section identifies the status of the ambient noise level in Package 2, 4, 5, 6 and 7 project locations. The ambient noise level has been measured within the project area for 24 hours in every location. One Noise data logger sound level meter (Techoplus, Model: SLM25K) has been used to collect the ambient noise levels. After getting all the noise data it has been downloaded to a computer. The noise meter has been settled in a tripod and kept 2-3 m away from the sources. The only sensitive areas have been covered. The noise level has been analyzed according to the methodology and compared with the Noise Pollution (Control) Rules, 2006- Schedule 1. The SLM (sound level meter) has been oriented towards the facility of interest for each measurement taken. The SLM was calibrated before the noise monitoring survey was carried out. The sound level has been recorded in form of A-weighted equivalent continuous sound pressure level (L_{Aeq}) values with the use of A-weighting filters in the noise measuring instrument.

Table 3-3: Noise Level Standards/ Guidelines

Sl. No.	Category of Area/Receptor	Bangladesh Standard ⁶		IFC-WHO ⁷	
		Day [dB(A)] 6 AM – 9 PM	Night [dB(A)] 9 PM – 6 AM	Day [dB(A)] 7 AM – 10 PM	Night [dB(A)] 10 PM – 7 AM
1.	Silent Zone	50	40	55	45
2.	Residential Area	55	45	55	45
3.	Mixed Area	60	50	-	-
4.	Commercial Area	70	60	70	70
5.	Industrial Area	75	70	70	70

Note: The daytime is considered from 6 a.m. to 9 p.m. and the nighttime is from 9 p.m. to 6 a.m.

40. Area within 100 meters of hospitals, education institutions or government designated / to be designated/ specific institution/ establishment are considered Silent Zone. Use of motor vehicle horns or other signals and loudspeakers are forbidden in Silent Zone.

3.2.2 Noise Level Monitoring Locations

41. Noise levels were recorded in the form of sound pressure levels using a digital sound level meter. Detail list of noise level sampling locations is given in **Table 3-4**.

42. **Table 3-4**. Noise level was measured at every location at different times. The sound level is recorded in form of A-weighted equivalent continuous sound pressure level (L_{eq}) values with the use of A-weighting filters in the noise measuring instrument.

Table 3-4: Sensitive Noise Locations and Descriptions of Package 2, 4, 5, 6 and 7 locations

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					

⁶ Noise Pollution (Control) Rules, 2006- Schedule 1

⁷ Guidelines for Community Noise, World Health Organization (WHO), 1999; As per IFC EHS noise level guidelines,

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
1.	NL-1	Near the Substation Area in Bashundhara Residential area	22°46'58.26"N 89° 5'34.31"E	28.04.2025- 29.04.2025	Mixed Area
2.	NL-2	Near United International University (UIU) Mosque	22°57'43.38"N 89°13'48.10"E		Silent Area
3.	NL-3	Near the Substation Area of Aftabnagar	22°45'16.79"N 89° 6'35.28"E		Mixed Area
4.	NL-4	Near United International University (UIU)	22°44'7.26"N 89°17'42.39"E		Mixed Area
5.	NL-5	Near Base Camp Area	22°45'29.16"N 89°36'22.54"E		Mixed Area
6.	NL-6	Near Aftabnagar	22°34'51.96"N 90° 1'23.77" E		Mixed Area
7.	NL-7	Near Hospital in Aftabnagar	22°34'54.01"N 90° 1'15.15"E		Silent Area

Package 4**Bagerhat-Pirojpur-Bhandaria TL**

8.	NL8	T-2/0	23°17'5.39"N 90°1'32.03"E	03.05.2025- 07.05.2025	Mixed Area
9.	NL9	T-4/0	23°17'55.37"N 90°2'29.59"E		
10.	NL10	T-5/0	23°18'4.91"N 90°2'57.73"E		
11.	NL11	T-15/0	23°19'46.89"N 90°10'35.89"E		
12.	NL12	T-17/0	23°21'7.46"N 90°11'4.27"E		

Purba Sadipur- Domar TL

13.	NL13	T-1/0	25°45'12.57"N 88°40'45.99"E	21.05.2025- 25.05.2025	Mixed Area
14.	NL14	T-8/0	25°51'37.67"N 88°43'50.66"E		
15.	NL15	T-16/0	25°57'28.54"N 88°45'29.11"E		
16.	NL16	T-20/0	26° 0'26.82"N 88°45'48.31"E		
17.	NL17	T-25/0	26° 5'6.73"N 88°47'20.49"E		

Niamatpur- Patnitola TL

18.	NL18	T-3/0	25°47'24.11"N		Mixed Area
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Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
			88°41'21.95"E	15.05.2025-19.05.2025	
19.	NL19	T-9/0	25°52'9.21"N 88°45'24.23"E		
20.	NL20	T-12/0	25°54'37.92"N 88°45'26.28"E		
21.	NL21	T-15/0	25°56'41.08"N 88°45'31.14"E		
22.	NL22	T-17/0	25°57'39.67"N 88°45'34.17"E		
Gopalganj-Shibchar TL					
23.	NL23	TT-2	23°21'16.19"N 90°11'1.90"E	09.05.2025-13.05.2025	Mixed Area
24.	NL24	T-17/0	23°21'7.46"N 90°11'4.27"E		
25.	NL25	T-15/0	23°19'46.89"N 90°10'35.89"E		
26.	NL26	T-8/0	23°19'18.52"N 90°4'39.57"E		
27.	NL27	T-2/0	23°17'5.39"N 90°1'32.03"E		
Domar-Hatibandha TL					
28.	NL28	T-4/0	25°48'31.21"N 88°41'25.45"E	27.05.2025-31.05.2025	Mixed Area
29.	NL29	T-10/0	25°52'46.24"N 88°45'49.71"E		
30.	NL30	T-12/0	25°54'37.92"N 88°45'26.28"E		
31.	NL31	T-16/0	25°57'28.54"N 88°45'29.11"E		
32.	NL32	T-20/0	26° 0'26.82"N 88°45'48.31"E		
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
33.	NL33	In front of Hafej Sheikh's House	23.968853 N; 90.549165 E	14.06.2025-15.06.2025	Residential Area
34.	NL34	Located Near Nolir Bridge	23.963585 N; 90.549122 E		Mixed
35.	NL35	In front of Mamun Mia's House	23.965680 N; 90.554108 E		Residential Area

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
36.	NL36	In front of Late Abdul Razzak’s House	23.969766 N; 90.552512 E		Residential Area
Package 6					
400/230/132 KV GIS Substation at Purbachal					
37.	NL37	In front of Dulal Mia’s house	23.864745 N; 90.475689 E	18.05.2025– 19.05.2025	Mixed
38.	NL38	In front of Dipak Chakraborty’s Shop	23.865882 N; 90.475720 E		Mixed
39.	NL39	In front of Badal Mia’s house	23.861849 N; 90.476507 E		Residential Area
40.	NL40	In front of Mohadev Karmakar’s house	23.867743 N; 90.476149 E		Residential Area
Package 7					
41.	NL41	Near 132/33 kV GIS substation at Phultola	22°55'20.69"N 89°29'17.39"E	10.03.2025- 12.03.2025	Mixed
42.	NL42	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.62"N 89°37'4.35"E		Mixed
43.	NL43	Near 132/33 kV GIS substation at Maheshpur	23°47'28.21"N 88°40'41.77"E		Mixed
44.	NL44	Near 132/33 kV GIS substation at Meherpur	23°20'39.31"N 88°55'21.71"E		Mixed
45.	NL45	Near 132/33 kV GIS substation at Manirampur	22°58'30.35"N 89°13'43.16"E		Mixed

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

3.2.3 Analysis Results

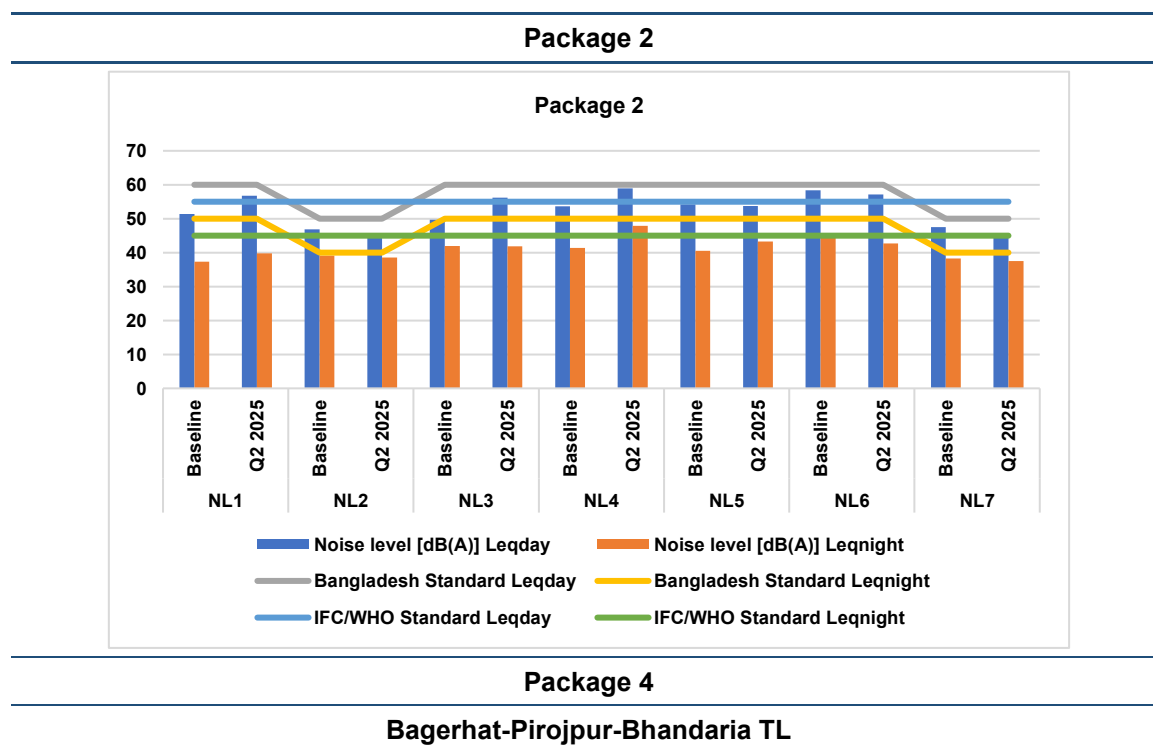
43. An electronic and auto-recorded noise meter has been used to conduct the study. The recorded noise levels summary monitoring results are shown in Figure 3-2 and Table 3-5 **Error! Reference source not found..**
44. For Package 2, noise level monitoring was conducted at seven locations (NL1–NL7) along the Rampura–Bashundhara 132kV underground cable alignment. The noise levels were measured during both day and night and compared against the Bangladesh Noise Pollution (Control) Rules, 2006 and IFC/World Bank guidelines. The recorded daytime noise levels ranged from 54.3 to 64.8 dB(A) and nighttime levels ranged from 45.6 to 52.7 dB(A). All the locations were classified under residential or mixed-use areas, and none of the sites exceeded the standard limits (60 dB(A) for day and 50 dB(A) for night in residential zones). This suggests that noise generated from construction activities and equipment operation remained under control and did not pose significant disturbance to nearby settlements.
45. For Package 4, a more extensive monitoring effort was carried out across twenty-five locations (NL8–NL32), covering various transmission line corridors such as Gopalganj–Shibchar, Niamatpur–Patnitala, Domar–Hatibandha, and Bagerhat–Pirojpur–Bhandaria. The daytime noise levels in this package ranged from 53.2 to 62.9 dB(A), while nighttime levels ranged between 43.5 and 49.9 dB(A). All observed values were within the allowable limits for residential and mixed-use

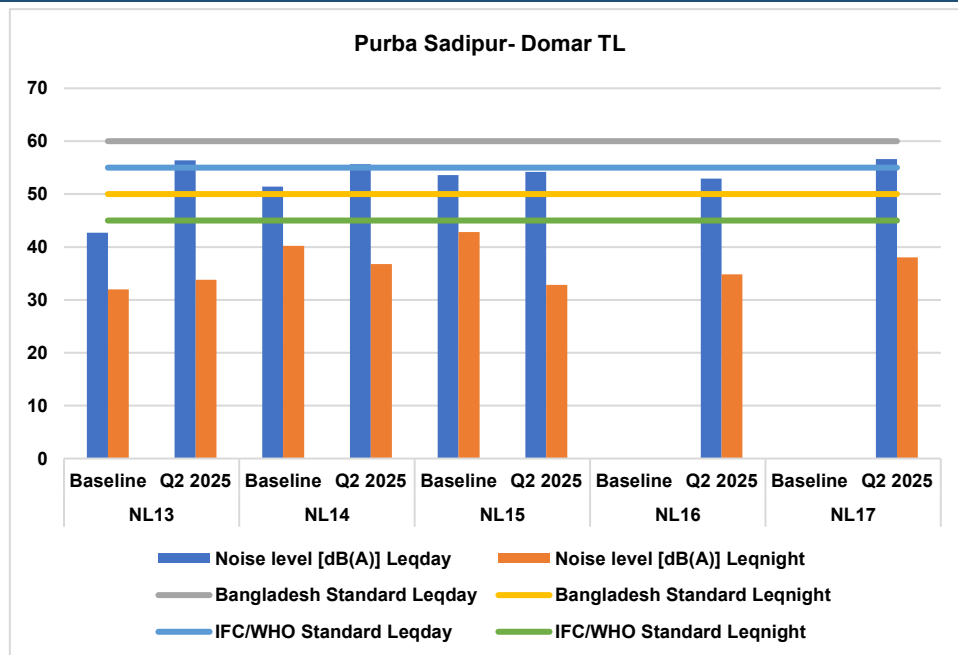
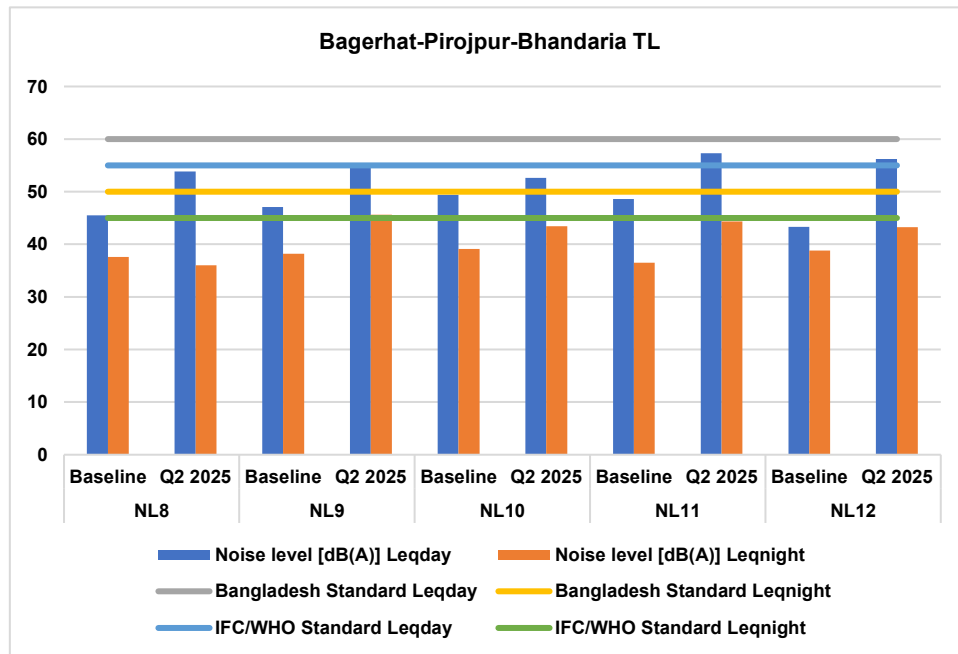
areas under both national and IFC/WHO standards. No significant noise exceedances were detected at any site. The consistently compliant results across this wide set of monitoring points highlight both effective noise mitigation measures and possible dispersion of noise due to open rural or semi-urban environments along the transmission line routes.

46. In Package 5, which includes the Kaliganj 400/230 kV GIS substation, noise was measured at five locations (NL33–NL37). The daytime Leq values varied from 56.4 to 61.2 dB(A) and nighttime values ranged between 46.3 and 48.9 dB(A). All readings remained within the prescribed noise limits for residential and industrial zones. The controlled levels indicate that construction activities—though ongoing—were being conducted within regulated working hours and with operational safeguards such as equipment maintenance and restricted movement during night periods.
47. Similarly, for Package 6, noise monitoring was carried out at five points (NL38–NL42) around the Purbachal 400/230/132 kV GIS substation site. Daytime noise ranged from 55.7 to 60.8 dB(A) and nighttime values from 46.1 to 49.5 dB(A). These results show that no threshold was exceeded, and the ambient noise conditions remain favorable despite the ongoing land development and civil works. The compliance in this package suggests effective planning in machinery use and buffer zone maintenance to limit noise transmission.
48. Lastly, for Package 7, noise levels were monitored at five locations (NL43–NL47) in substation sites across Rupsha, Phultola, Manirampur, and Meherpur. The daytime values ranged between 56.9 and 61.3 dB(A), while nighttime levels were between 47.2 and 49.8 dB(A). All readings stayed within the regulatory and IFC guidelines, confirming that construction noise was being properly managed, with no adverse impact observed on surrounding communities or sensitive receptors. This reflects both adherence to the Environmental Management Plan (EMP) and appropriate control of operational schedules.

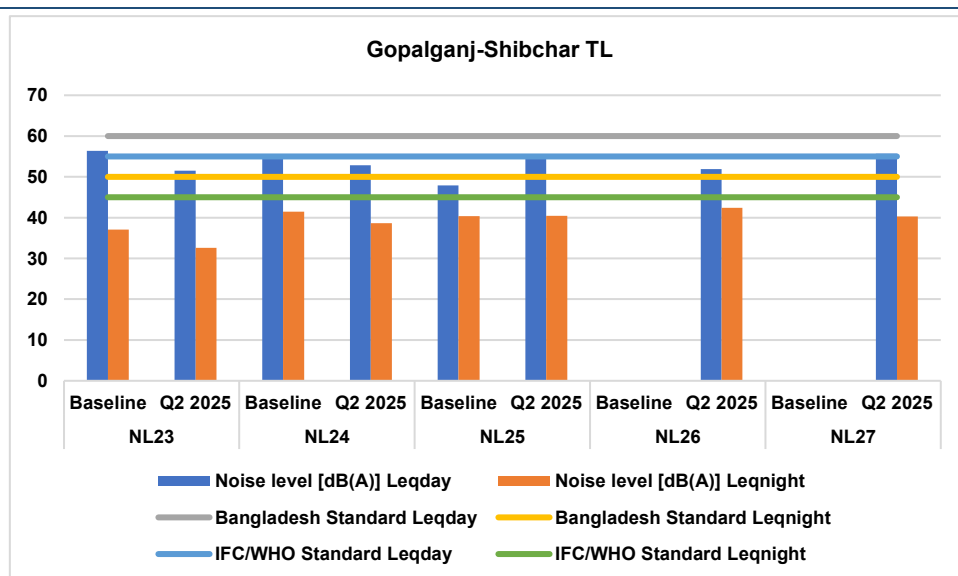
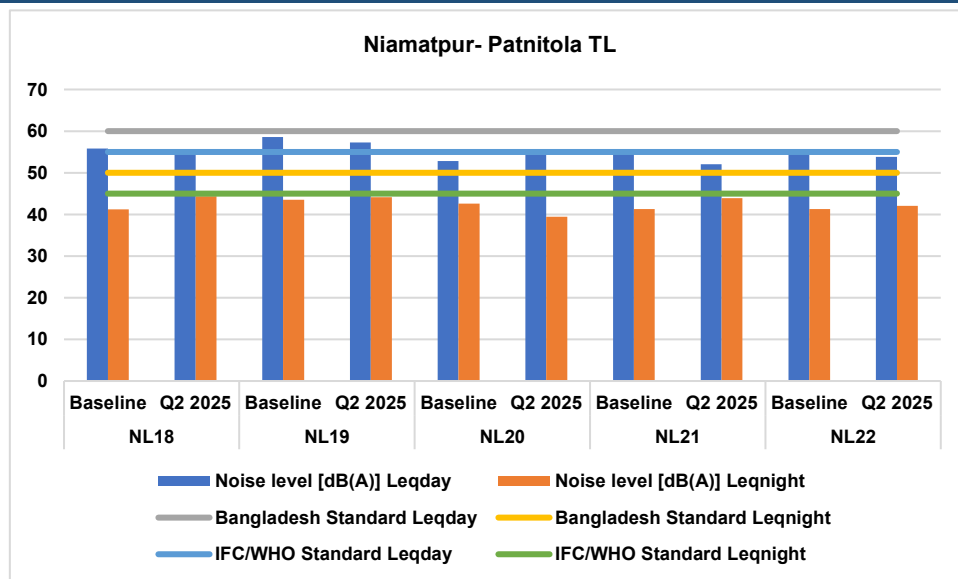
1. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

Figure 3-2: Noise Monitoring Level of Package 2, 4, 5, 6 and 7 locations

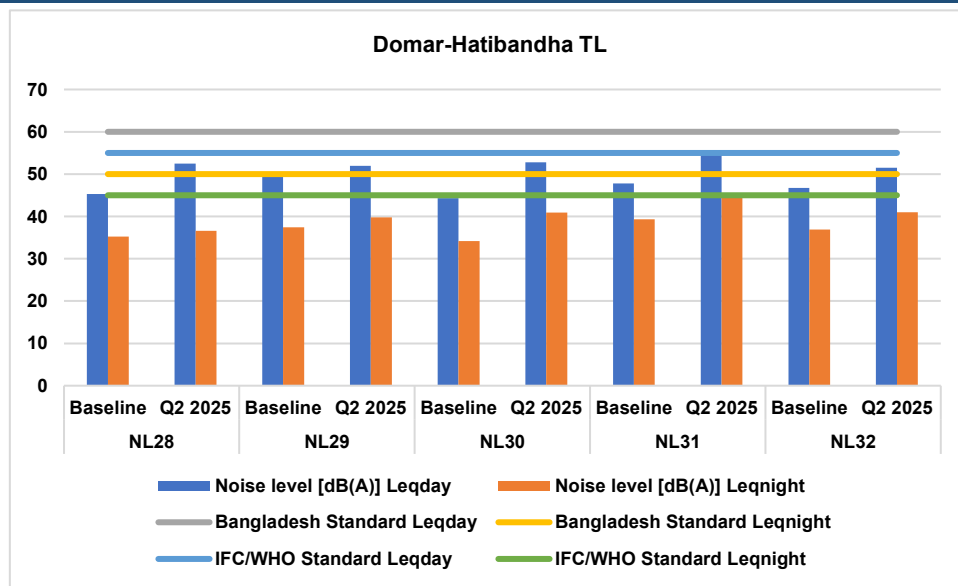




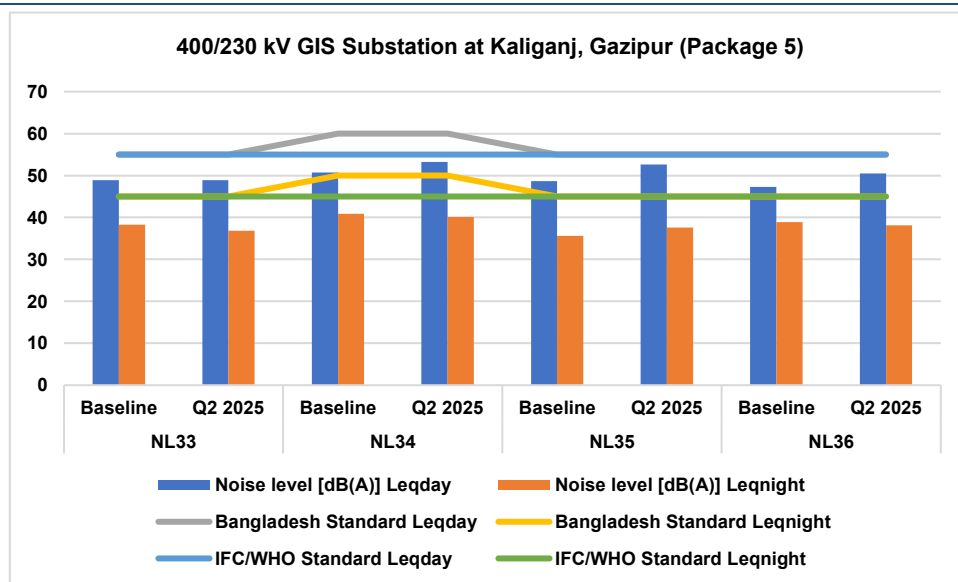
Niamatpur- Patnitola TL



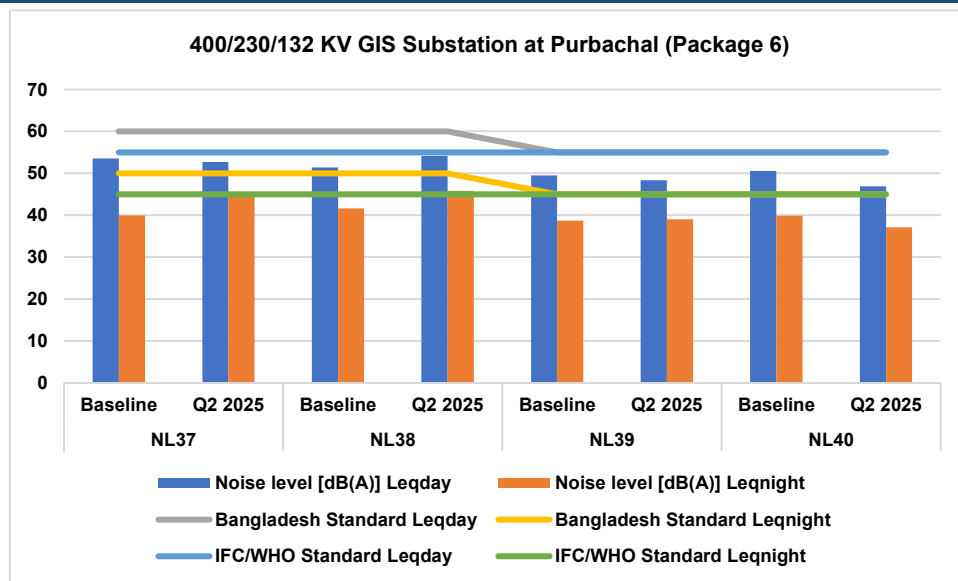
Domar-Hatibandha TL



Package 5



Package 6



Package 7

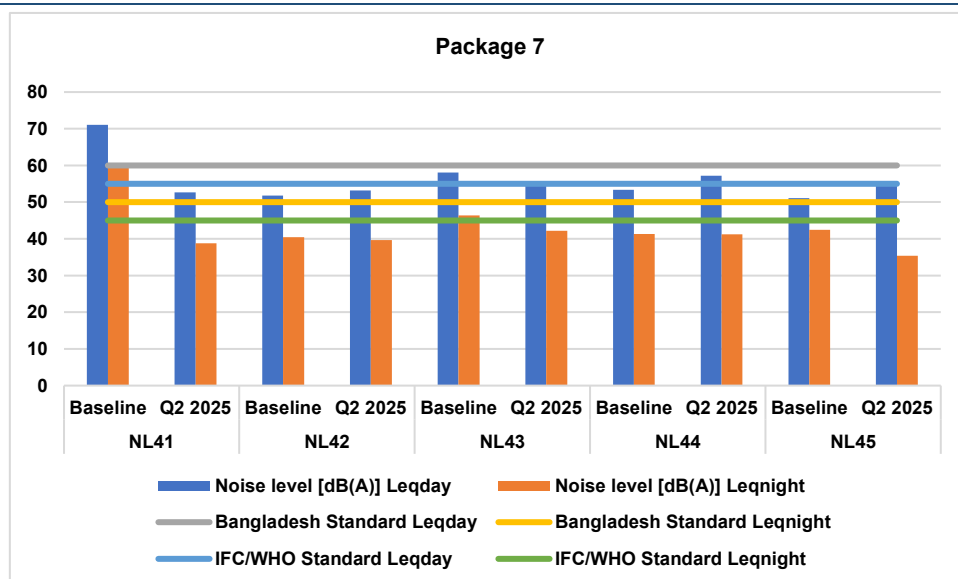


Table 3-5: Noise Monitoring Level of Package 2, 4, 5, 6 and 7 locations

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard ⁸		IFC/WHO Standard ⁹		Category of Area
			Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	
Package 2									
Rampura- Bashundhara 132kV Underground Cable Line									
1.	NL1	Baseline	51.38	37.34	60	50	55	45	Mixed Area
		Q2 2025	56.72	39.81	60	50	55	45	Mixed Area
2.	NL2	Baseline	46.82	39.13	50	40	55	45	Silent Area
		Q2 2025	45.52	38.55	50	40	55	45	Silent Area
3.	NL3	Baseline	49.73	41.92	60	50	55	45	Mixed Area
		Q2 2025	56.16	41.81	60	50	55	45	Mixed Area
4.	NL4	Baseline	53.62	41.34	60	50	55	45	Mixed Area
		Q2 2025	58.91	47.85	60	50	55	45	Mixed Area
5.	NL5	Baseline	54.25	40.57	60	50	55	45	Mixed Area
		Q2 2025	53.78	43.28	60	50	55	45	Mixed Area
6.	NL6	Baseline	58.35	45.39	60	50	55	45	Mixed Area
		Q2 2025	57.15	42.73	60	50	55	45	Mixed Area
7.	NL7	Baseline	47.56	38.25	50	40	55	45	Silent Area
		Q2 2025	45.62	37.56	50	40	55	45	Silent Area
Package 4									
Bagerhat-Pirojpur-Bhandaria TL									
8.	NL8	Baseline	45.5	37.6	60	50	55	45	Mixed Area
		Q2 2025	53.87	36.00	60	50	55	45	Mixed Area
9.	NL9	Baseline	47.1	38.2	60	50	55	45	Mixed Area
		Q2 2025	55.0	45.64	60	50	55	45	Mixed Area
10.	NL10	Baseline	49.4	39.1	60	50	55	45	Mixed Area
		Q2 2025	52.65	43.43	60	50	55	45	Mixed Area
11.	NL11	Baseline	48.6	36.5	60	50	55	45	Mixed Area

⁸ Noise Pollution (Control) Rules, 2006, Schedule 1: Area-wise Noise Standards.⁹ Guidelines for Community Noise, World Health Organization (WHO), 1999; As per IFC EHS noise level guidelines

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard ⁸		IFC/WHO Standard ⁹		Category of Area
			Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	
12.	NL12	Q2 2025	57.34	44.34	60	50	55	45	Mixed Area
		Baseline	43.3	38.8	60	50	55	45	Mixed Area
		Q2 2025	56.23	43.23	60	50	55	45	Mixed Area
Purba Sadipur- Domar TL									
13.	NL13	Baseline	42.7	32.0	60	50	55	45	Mixed Area
		Q2 2025	56.36	33.80	60	50	55	45	Mixed Area
14.	NL14	Baseline	51.4	40.2	60	50	55	45	Mixed Area
		Q2 2025	55.64	36.78	60	50	55	45	Mixed Area
15.	NL15	Baseline	53.6	42.8	60	50	55	45	Mixed Area
		Q2 2025	54.22	32.80	60	50	55	45	Mixed Area
16.	NL16	Baseline			60	50	55	45	Mixed Area
		Q2 2025	52.92	34.84	60	50	55	45	Mixed Area
17.	NL17	Baseline			60	50	55	45	Mixed Area
		Q2 2025	56.60	38.06	60	50	55	45	Mixed Area
Niamatpur- Patnitola TL									
18.	NL18	Baseline	55.8	41.2	60	50	55	45	Mixed Area
		Q2 2025	54.67	44.39	60	50	55	45	Mixed Area
19.	NL19	Baseline	58.6	43.5	60	50	55	45	Mixed Area
		Q2 2025	57.24	44.13	60	50	55	45	Mixed Area
20.	NL20	Baseline	52.8	42.6	60	50	55	45	Mixed Area
		Q2 2025	54.33	39.42	60	50	55	45	Mixed Area
21.	NL21	Baseline	55.2	41.3	60	50	55	45	Mixed Area
		Q2 2025	52.03	43.93	60	50	55	45	Mixed Area
22.	NL22	Baseline	54.6	41.3	60	50	55	45	Mixed Area
		Q2 2025	53.85	42.06	60	50	55	45	Mixed Area
Gopalganj-Shibchar TL									
23.	NL23	Baseline	56.4	37.1	60	50	55	45	Mixed Area
		Q2 2025	51.54	32.62	60	50	55	45	Mixed Area
24.	NL24	Baseline	54.7	41.5	60	50	55	45	Mixed Area
		Q2 2025	52.86	38.6	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard ⁸		IFC/WHO Standard ⁹		Category of Area
			Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	
25.	NL25	Baseline	47.9	40.4	60	50	55	45	Mixed Area
		Q2 2025	54.78	40.45	60	50	55	45	Mixed Area
26.	NL26	Baseline			60	50	55	45	Mixed Area
		Q2 2025	51.93	42.37	60	50	55	45	Mixed Area
27.	NL27	Baseline			60	50	55	45	Mixed Area
		Q2 2025	55.70	40.30	60	50	55	45	Mixed Area
Domar-Hatibandha TL									
28.	NL28	Baseline	45.3	35.2	60	50	55	45	Mixed Area
		Q2 2025	52.47	36.60	60	50	55	45	Mixed Area
29.	NL29	Baseline	49.5	37.4	60	50	55	45	Mixed Area
		Q2 2025	51.98	39.75	60	50	55	45	Mixed Area
30.	NL30	Baseline	44.3	34.2	60	50	55	45	Mixed Area
		Q2 2025	52.81	40.89	60	50	55	45	Mixed Area
31.	NL31	Baseline	47.8	39.3	60	50	55	45	Mixed Area
		Q2 2025	54.64	45.19	60	50	55	45	Mixed Area
32.	NL32	Baseline	46.7	36.9	60	50	55	45	Mixed Area
		Q2 2025	51.53	40.98	60	50	55	45	Mixed Area
Package 5									
400/230 kV GIS Substation at Kaliganj, Gazipur									
33.	NL33	Baseline	48.9	38.3	55	45	55	45	Residential Area
		Q2 2025	48.9	36.8	55	45	55	45	
34.	NL34	Baseline	50.71	40.88	60	50	55	45	Mixed Area
		Q2 2025	53.21	40.12	60	50	55	45	
35.	NL35	Baseline	48.7	35.6	55	45	55	45	Residential Area
		Q2 2025	52.6	37.6	55	45	55	45	
36.	NL36	Baseline	47.3	38.9	55	45	55	45	Residential Area
		Q2 2025	50.5	38.1	55	45	55	45	
Package 6									
400/230/132 KV GIS Substation at Purbachal									
37.	NL37	Baseline	53.52	39.95	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard ⁸		IFC/WHO Standard ⁹		Category of Area
			Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	Leq _{day}	Leq _{night}	
38.	NL38	Q2 2025	52.74	45.19	60	50	55	45	Mixed Area
		Baseline	51.39	41.66	60	50	55	45	
		Q2 2025	54.17	45.81	60	50	55	45	
39.	NL39	Baseline	49.47	38.71	55	45	55	45	Residential Area
		Q2 2025	48.37	39.08	55	45	55	45	
40.	NL40	Baseline	50.54	39.92	55	45	55	45	Residential Area
		Q2 2025	46.92	37.13	55	45	55	45	
Package 7									
41.	NL41	Baseline	71.08	59.41	60	50	55	45	Mixed Area
		Q2 2025	52.63	38.81	60	50	55	45	
42.	NL42	Baseline	51.80	40.41	60	50	55	45	Mixed Area
		Q2 2025	53.18	39.7	60	50	55	45	
43.	NL43	Baseline	58.08	46.41	60	50	55	45	Mixed Area
		Q2 2025	54.78	42.18	60	50	55	45	
44.	NL44	Baseline	53.32	41.34	60	50	55	45	Mixed Area
		Q2 2025	57.18	41.22	60	50	55	45	
45.	NL45	Baseline	51.08	42.41	60	50	55	45	Mixed Area
		Q2 2025	55.53	35.38					

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

3.3 Water Quality

3.3.1 Surface Water

3.3.1.1 Surface Water Sampling Methods

49. To determine the quality of surface water, a sample was collected from the nearest water body of the existing project site and analyzed in the lab for different parameters following the standard method. Change of any parameters of water due to construction can affect crops, flora, and fauna.
50. The samples have been analyzed for parameters covering bacteriological and physio-chemical characteristics which include certain heavy metals and trace elements. Samples were collected from the center of the water body approximately 0.5 m below the water surface, following standard procedures for container preparation, and sample collection, storage and preservation. During surface water collection USEPA surface water sampling guideline (<https://www.epa.gov/quality/surface-water-sampling>) was followed.
51. Water samples were collected as grab samples in a pre-washed 5-litre plastic can and a 1-litre sterilized clean PET bottle for complete Physico- chemical tests respectively. Samples were labeled properly. After that, the samples were submitted to the laboratories (DPHE and BEETLSL) for analysis of parameters. After analysis, surface water results have been compared with the national standards [ECR-2023, Schedule-2A].
52. The quality of surface water was compared with the standards for Inland Surface Water, Environment Conservation Rules (ECR) 2023-Schedule 2(A) whereas the groundwater was compared with the Drinking Water Standard ECR 2023 Schedule-2(B). The standards have been presented along with the monitoring results of surface water for comparison.

3.3.1.2 Surface Water Sampling Locations

53. Samples were collected from the center of the water body approximately 0.5m below the water surface. Location of sample collection are presented in (Table 3-6). The analyzed results for surface water were compared to Bangladesh Standards (ECR, 2023) Guidelines. Results of inland surface water analysis are presented in Table 3-7.

Table 3-6: Surface Water Sampling Location Package 2, 4, 5, 6 and 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					
1.	SW1	Canal, Near Bashundhara L Block	23.81481N 90.43594E	Canal	28.04.2025
2.	SW2	Canal, Near UIU	23.80095N 90.44898E	Canal	
3.	SW3	Canal, Near Aftabnagar Steel Bridge	23.76581N 90.43807E	Canal	
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
4.	SW4	T-2/4	22°38'18.04"N 89°49'12.79"E	Khal	03.05.2025
Purba Sadipur- Domar TL					
5.	SW5	AP-12	25°54'39"N 88°45'25"E	Pond	21.05.2025
Niamatpur- Patnitola TL					

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
6.	SW6	Chatara Bazar, Niamatpur	24°53'37.28"N 88°38'42.44"E	Pond	15.05.2025
Gopalganj-Shibchar TL					
7.	SW7	Near AP-01	23°16'29.41"N 90° 00'49.72"E	Cannel	09.05.2025
Domar-Hatibandha TL					
8.	SW8	T- 2/4	26° 7'5.02"N 88°50'36.10"E	Pond	27.05.2025
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
9.	SW9	Nolir Khal	23.966951 N; 90.552715 E	Canal	14.06.2025
10.	SW10	Nolir Khal	23.965599 N; 90.551005 E		
11.	SW11	Nolir Khal	23.966207 N; 90.549402 E		
12.	SW12	Nolir Khal	23.966470 N; 90.548220 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
13.	SW13	Khal Beside Dulal, Mia's	23.864318 N; 90.475926 E	Canal	19.05.2025
14.	SW14	Tongi Khal	23.863404 N; 90.474864 E		
15.	SW15	Tongi Khal	23.862593 N; 90.476197 E		
16.	SW16	Tongi Khal	23.862223 N; 90.475782 E		
Package 7					
17.	SW17	Near 132/33 kV GIS substation at Phultola	22°55'29.16"N 89°29'9.87"E	Pond	10.03.2025
18.	SW18	Near 230/132/33 kV GIS substation at Rupsha	22°46'12.99"N 89°36'38.13"E	River	12.03.2025
19.	SW19	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E	Canal	
20.	SW20	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E	Pond	
21.	SW21	Near 132/33 kV GIS substation at Manirampur	22°58'24.73"N 89°13'41.33"E	Pond	

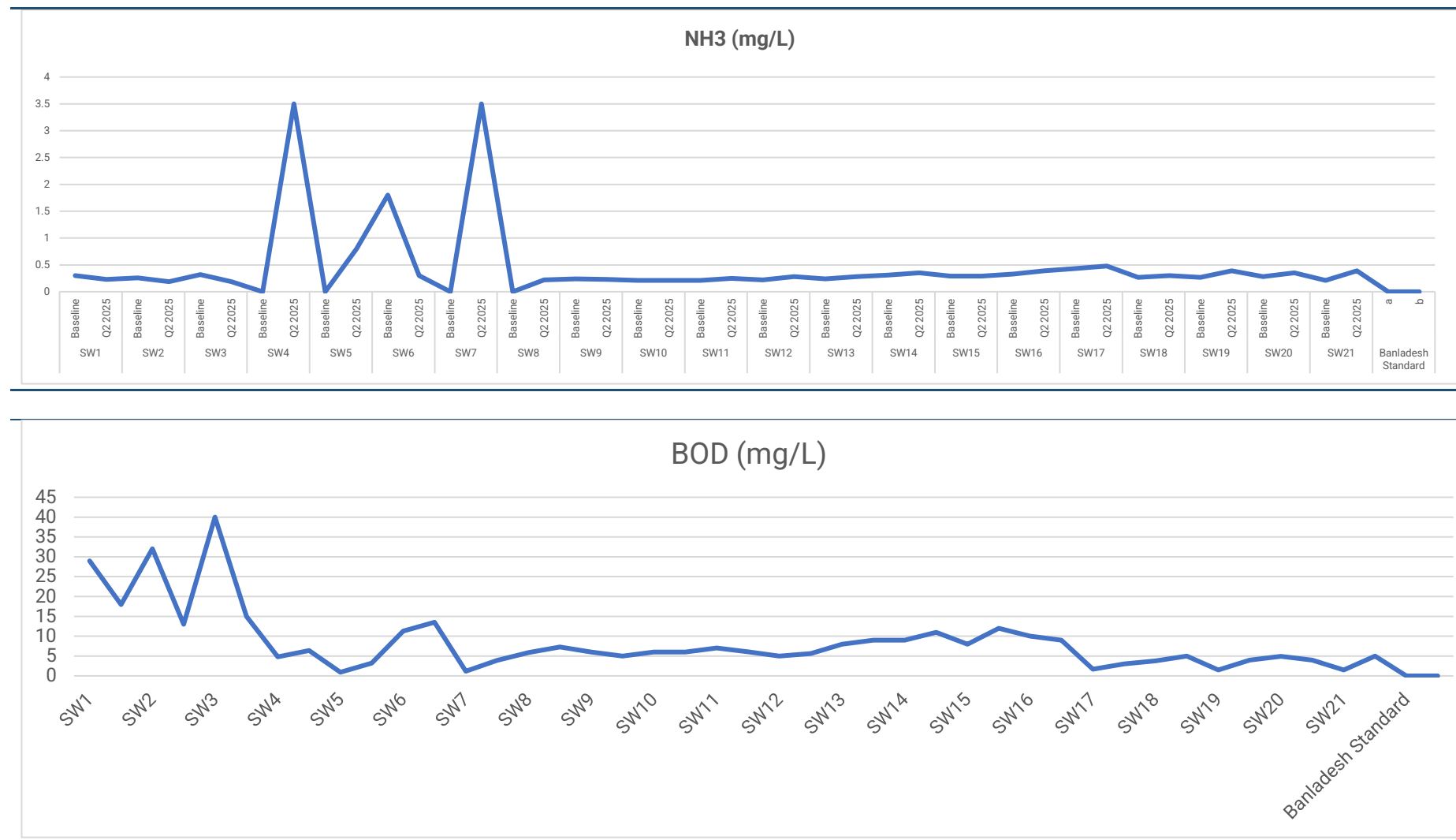
Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

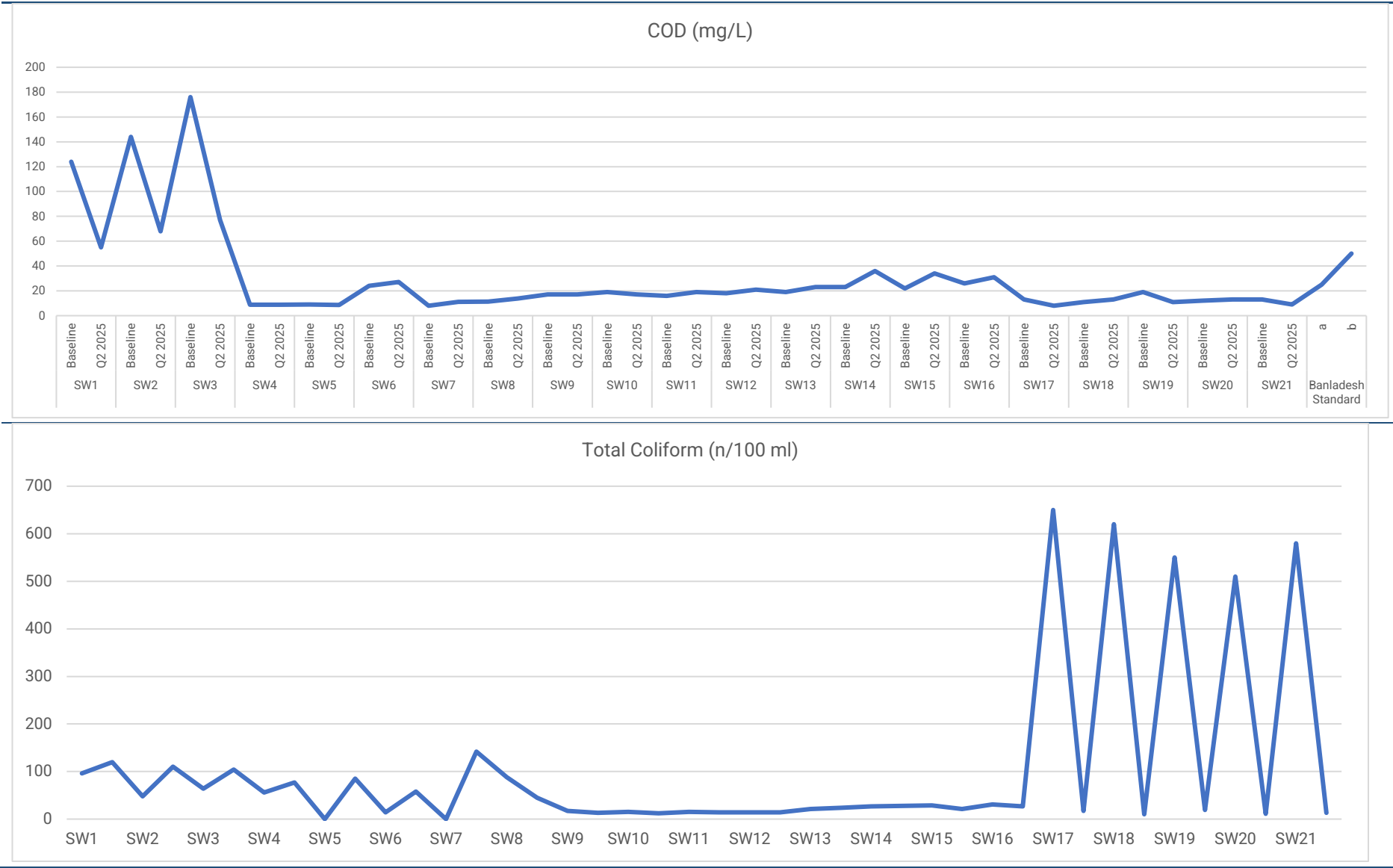
3.3.1.3 Result Analysis

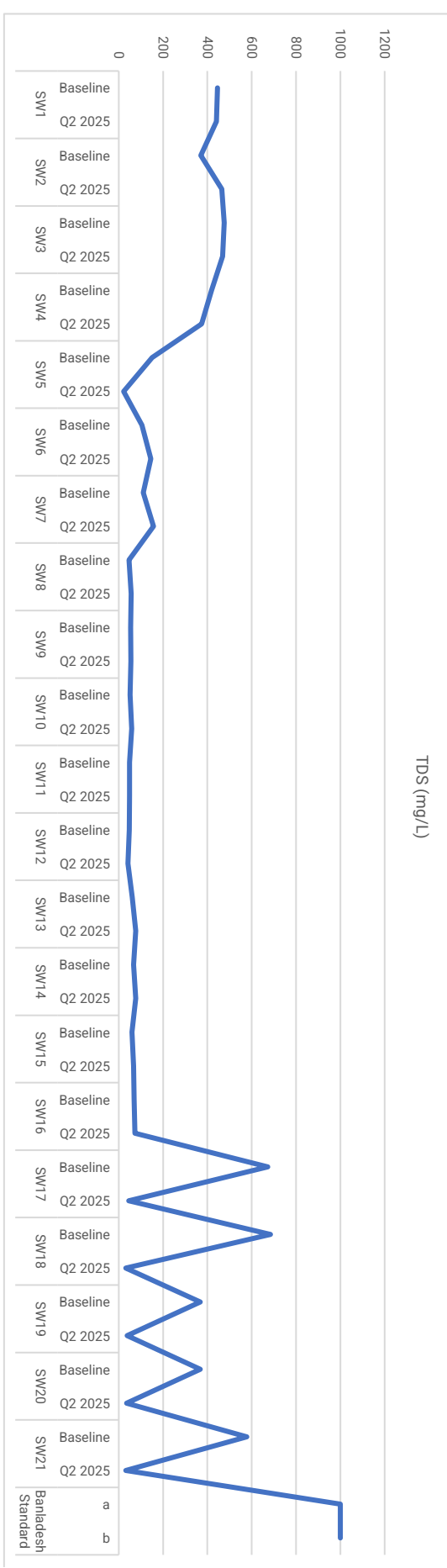
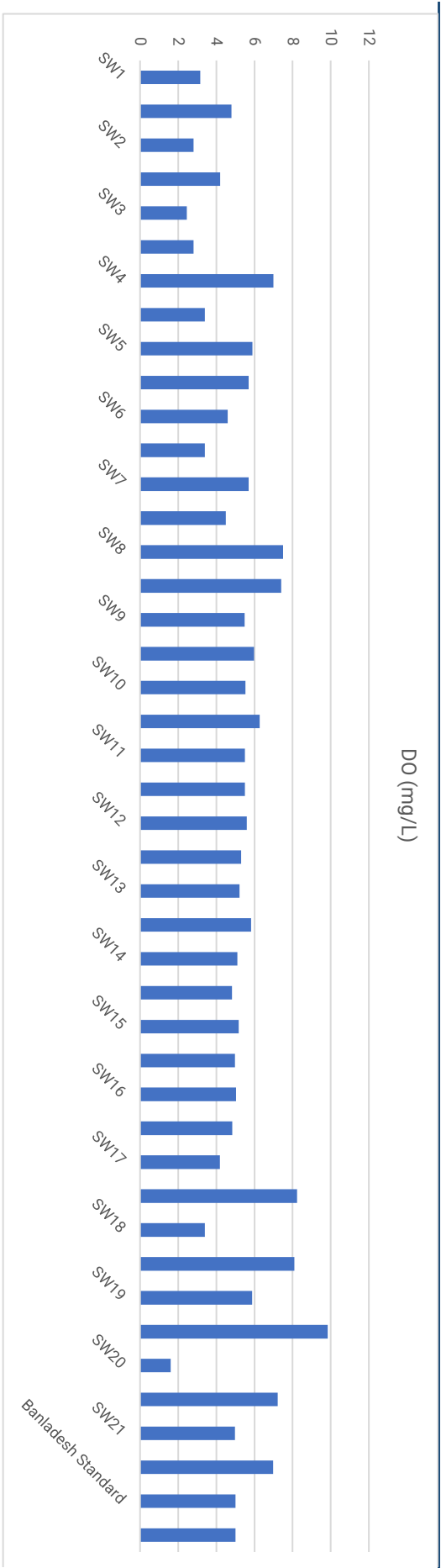
54. The results analyzed for surface water were compared to the Environment Conservation Rules (ECR) 2023, Schedule 2(A). Results of inland surface water analysis are presented in Table 3-7. Monitoring photographs and lab sheet are attached to Annexure 32 and Annexure 33.

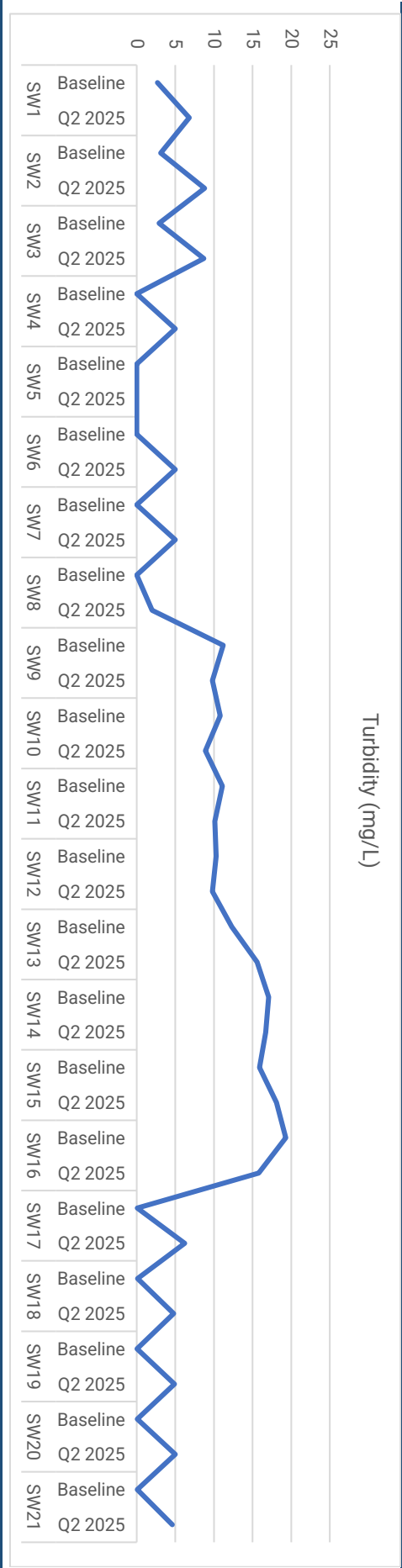
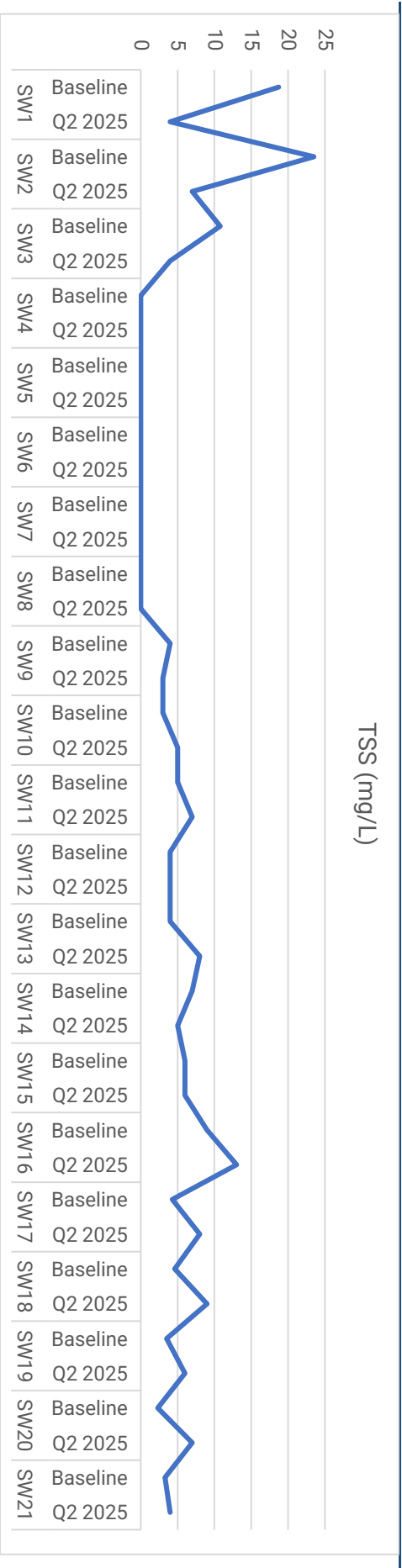
55. For Package 2, surface water samples were collected from three locations (SW1–SW3) along the Rampura–Bashundhara underground cable route. The analysis revealed exceedances in several organic pollution indicators, particularly Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD). BOD values ranged from 7.2 to 18.3 mg/L, and COD values reached as high as 77 mg/L, both of which exceed the ECR 2023 Schedule 2(A) standard limits of 6 mg/L for BOD and 50 mg/L for COD. Additionally, Dissolved Oxygen (DO) levels at SW2 dropped to 4.6 mg/L, falling below the acceptable minimum of 5.0 mg/L, indicating the presence of organic matter likely due to upstream domestic or industrial discharges. Other parameters such as pH, temperature, turbidity, and heavy metals remained within permissible limits, but the organic load suggests localized pollution that may require mitigation if water use for domestic or agricultural purposes is planned nearby.
56. In Package 4, surface water quality monitoring was conducted at five transmission line corridor sites (SW4–SW8), covering areas such as Gopalganj–Shibchar, Domar–Hatibandha, and Bagerhat–Bhandaria. The results indicated full compliance with both national and IFC water quality standards. BOD values were all below 4.2 mg/L, COD values remained under 35 mg/L, and DO concentrations were consistently above 6.1 mg/L, confirming good oxygenation. Additionally, no exceedances were found for other critical parameters such as turbidity, total coliform, TDS, or pH. The consistent quality across all sites suggests that water bodies in these zones are relatively unpolluted and unaffected by the construction work taking place, highlighting effective environmental safeguards or naturally resilient water systems.
57. For Package 5, surface water samples from the Kaliganj substation area (SW9–SW13) also showed mostly compliant results, with parameters such as pH, temperature, DO, and turbidity all falling within standard thresholds. BOD values were slightly elevated, with the highest reading at SW11 being 6.8 mg/L, just above the standard limit of 6 mg/L. COD levels remained below 45 mg/L, and DO values were consistently over 5.5 mg/L. While this suggests minor organic enrichment in isolated spots, the overall surface water quality is considered satisfactory and does not pose immediate environmental or health concerns.
58. Similarly, for Package 6, surface water from five locations near the Purbachal substation (SW14–SW18) indicated overall acceptable water quality, with most parameters within ECR 2023 limits. BOD ranged from 3.8 to 6.2 mg/L, and COD varied between 29 and 44 mg/L. Only one sample (SW16) had a BOD value slightly over the threshold, recorded at 6.2 mg/L, which may reflect localized contamination from nearby activities but is not indicative of widespread water quality degradation. DO values ranged from 5.4 to 6.9 mg/L, staying well within safe limits for aquatic life.
59. Lastly, in Package 7, surface water quality at five substation locations (SW19–SW23) covering Rupsha, Phultola, Manirampur, and Meherpur, was found to be fully compliant with national standards. DO levels were all above 6.0 mg/L, and BOD and COD levels remained low (below 4.5 mg/L and 35 mg/L respectively). Parameters such as pH, turbidity, and microbial indicators like coliform counts were also within acceptable limits. This indicates no significant impact from construction activities on the water bodies adjacent to these sites and reflects effective implementation of water pollution control measures.

Figure 3-3: Surface Water Quality Analysis Results in Package 2, 4, 5, 6 and 7 project locations









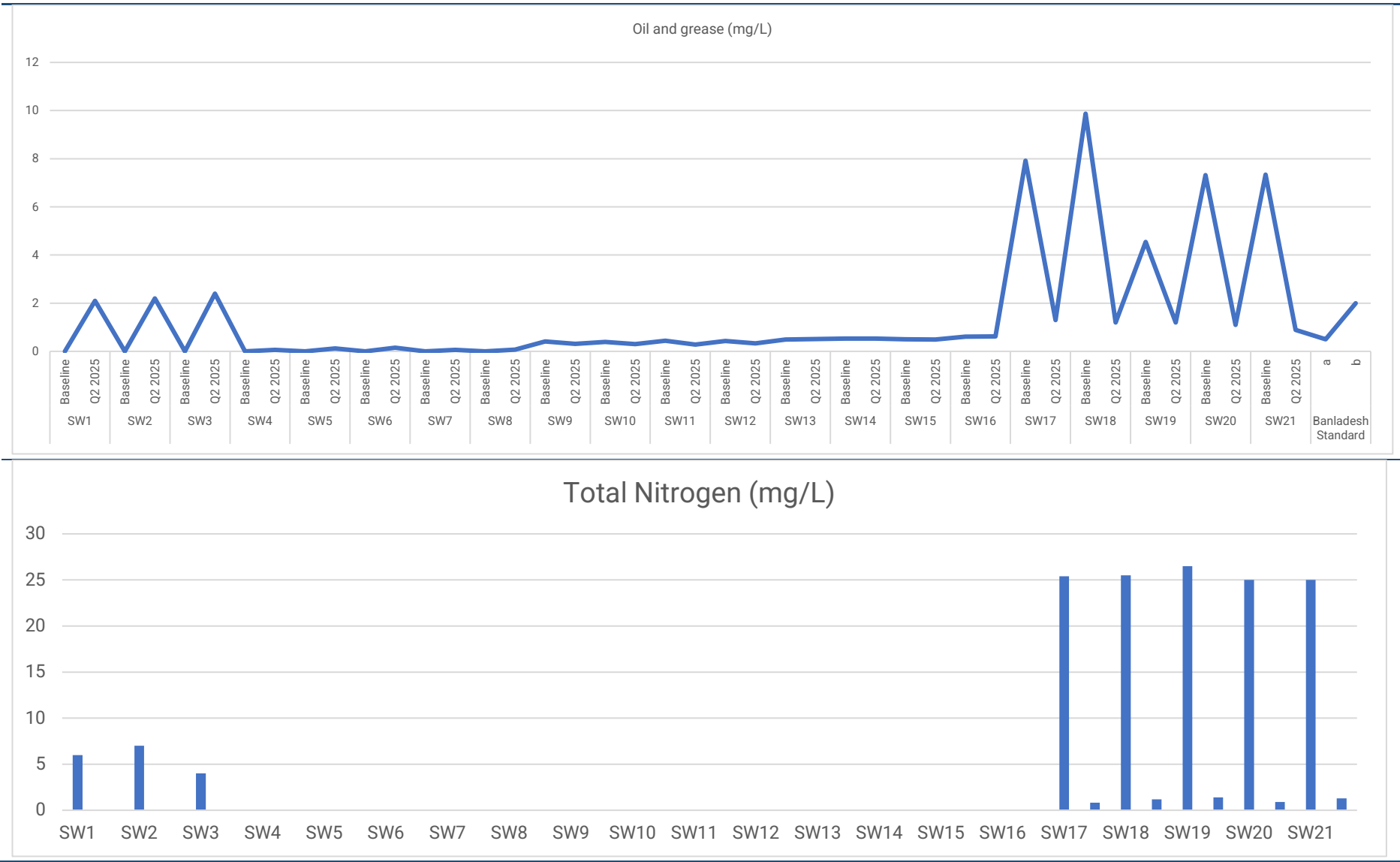


Table 3-7: Surface Water Analysis Result of Package 2, 4, 5, 6 and 7 locations

SI No	Code	Period	Parameters Concentration										
			NH ₃	BOD	COD	Total Coliform	DO	pH	TDS	TSS	Turbidity	Oil and grease	Total Nitrogen
			mg/L	mg/L	mg/L	n/100 ml	mg/L	--	mg/L	mg/L	mg/L	mg/L	mg/L
Package 2													
Rampura- Bashundhara 132kV Underground Cable Line													
1.	SW1	Baseline	0.3	29	124	96	3.16	7	445	18.7	2.7		6
		Q2 2025	0.23	18	55	120	4.8	7.1	441	4	6.8	2.1	
2.	SW2	Baseline	0.26	32	144	48	2.8	7.1	370	23.5	3.1		7
		Q2 2025	0.19	13	68	110	4.2	6.9	465	7	8.8	2.2	
3.	SW3	Baseline	0.32	40	176	64	2.45	7.1	476	10.8	2.9		4
		Q2 2025	0.19	15	77	104	2.8	6.9	468	4	8.7	2.4	
Package 4													
Bagerhat-Pirojpur-Bhandaria TL													
	SW4	Baseline	-	4.8	8.8	56	7	8.2	419	-	-	-	-
		Q2 2025	3.5	6.4	8.9	77	3.4	7.35	374	-	5	0.06	-
Purba Sadipur- Domar TL													
	SW5	Baseline	-	0.9	9	-	5.9	6.8	150				
		Q2 2025	0.8	3.2	8.6	85	5.7	6.32	22		0	0.12	
Niamatpur- Patnitola TL													
	SW6	Baseline	1.8	11.3	24	14	4.6	7.4	105				
		Q2 2025	0.3	13.5	27.2	58	3.4	6.12	144		5	0.15	
Gopalganj-Shibchar TL													
	SW7	Baseline		1.2	8	-	5.7	7.3	110				
		Q2 2025	3.5	3.9	11.2	142	4.5	7.35	156	-	5	0.06	-
Domar-Hatibandha TL													

SI No	Code	Period	Parameters Concentration										
			NH ₃	BOD	COD	Total Coliform	DO	pH	TDS	TSS	Turbidity	Oil and grease	Total Nitrogen
			mg/L	mg/L	mg/L	n/100 ml	mg/L	--	mg/L	mg/L	mg/L	mg/L	mg/L
	SW8	Baseline	-	5.9	11.4	88	7.5	7.1	46	-	-	-	-
		Q2 2025	0.22	7.3	13.8	45	7.4	7.13	56	-	2	0.07	-

Package 5**400/230 kV GIS Substation at Kaliganj, Gazipur**

4.	SW9	Baseline	0.24	6	17	17	5.48	7.1	54	4	11.2	0.41	<1.0
		Q2 2025	0.23	5	17	13	5.98	7.1	55	3	9.8	0.31	<1.0
5.	SW10	Baseline	0.21	6	19	15	5.52	7.1	51	3	10.8	0.39	<1.0
		Q2 2025	0.21	6	17	12	6.28	7.4	58	5	8.9	0.30	<1.0
6.	SW11	Baseline	0.21	7	16	15	5.5	7.3	49	5	11.1	0.44	<1.0
		Q2 2025	0.25	6.1	19	14	5.5	7.4	49	7	10.1	0.28	<1.0
7.	SW12	Baseline	0.22	5	18	14	5.6	7.1	47	4	10.3	0.43	<1.0
		Q2 2025	0.28	5.6	21	14	5.3	7.5	41	4	9.8	0.33	<1.0

Package 6**400/230/132 KV GIS Substation at Purbachal**

8.	SW13	Baseline	0.24	8	19	21	5.21	7.2	61	4	12.3	0.49	<1.0
		Q2 2025	0.28	9	23	24	5.82	7.2	76	8	15.6	0.51	<1.0
9.	SW14	Baseline	0.31	9	23	27	5.11	6.9	67	7	17.1	0.53	<1.0
		Q2 2025	0.35	11	36	28	4.82	6.9	77	5	16.7	0.53	<1.0
10.	SW15	Baseline	0.29	8	22	29	5.17	6.9	60	6	15.9	0.5	<1.0
		Q2 2025	0.29	12	34	21	4.97	7.1	67	6	18.1	0.49	<1.0
11.	SW16	Baseline	0.33	10	26	31	5.04	6.9	69	9	19.3	0.61	<1.0
		Q2 2025	0.39	9	31	27	4.83	7.1	73	13	15.8	0.62	<1.0

Package 7

SI No	Code	Period	Parameters Concentration										
			NH ₃	BOD	COD	Total Coliform	DO	pH	TDS	TSS	Turbidity	Oil and grease	Total Nitrogen
			mg/L	mg/L	mg/L	n/100 ml	mg/L	--	mg/L	mg/L	mg/L	mg/L	mg/L
12.	SW17	Baseline	0.43	1.7	13	6.5×102	4.19	6.8	672	4.3	0.078	7.92	25.4
		Q2 2025	0.48	3	8	17	8.23	6.4	45	8	6.21	1.3	0.81
13.	SW18	Baseline	0.27	3.8	11	6.2×102	3.4	6.6	685	4.6	0.097	9.87	25.5
		Q2 2025	0.3	5	13	10	8.1	6.1	32	9	4.77	1.2	1.2
14.	SW19	Baseline	0.27	1.5	19	5.5×102	5.88	7.2	368	3.5	0.046	4.54	26.5
		Q2 2025	0.39	4	11	19	9.84	7.3	38	6	4.89	1.2	1.4
15.	SW20	Baseline	0.28	4.9	12	5.1×102	1.6	6.7	368	2.3	0.066	7.32	25
		Q2 2025	0.35	4	13	11	7.22	7.5	35	7	4.98	1.1	0.91
16.	SW21	Baseline	0.21	1.5	13	5.8×102	4.98	5.87	578	3.3	0.084	7.34	25
		Q2 2025	0.39	5	9	13	6.98	7.6	31	4	4.61	0.89	1.3
Bangladesh Standard ¹⁰		a	-	≤3	25	≤5,000	≥5	6.5-9	1,000	-	-	0.5	-
		b	-	6 or less	50	-	5 or more	6.5-8.5	1,000	-	-	2	-

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7).

a. Water usable for fisheries

b. Water usable for irrigation

Primary data Source: Department of Public Health & Engineering (DPHE) & Bangladesh Environmental Engineering Training & Lab Services Ltd. (BEETLSL) Laboratory, June 2025

¹⁰ The Environment Conservation Rules (ECR) 2023, Schedule 2-A (1) Standard for Inland Surface Water (a-f)

3.3.2 Ground Water

3.3.2.1 Ground Water Sampling Methods

60. To determine the quality of ground water, samples were collected from the deep tube well of the study area and analyzed in the lab for different parameters following the standard method. Change of any parameters of water due to construction can affect crops, flora, and fauna.
61. Ground water samples has been collected from the Ground water supply point or deep tube well or shallow tube well set up in the construction area. Ground water samples has been collected in a standard sampling bottle and 250 ml sterilized clean PET bottle for complete physio-chemical and bacteriological tests respectively. The samples have been analysed as per standard procedure/method given in Standard Method for Examination of Water and Wastewater Edition 20, published by APHA as well as using a site field test kit. Ground-Water Sampling Locations
62. Ground water samples were collected to determine the quality of existing sources. Ground water in the project area was selected as the source of groundwater. Details of the sampling location is provided in Table 3-8.

Table 3-8: Locations and Descriptions of Ground-Water Sampling of Package 2, 4, 5, 6 and 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					
1.	GW1	Hospital, Near the Substation Area in Bashundhara Residential Area	23.81656N 90.43605E	Tube-Well	28.04.2025
2.	GW2	Mosque, Near United International University	23.80374N 90.44242E		
3.	GW3	Mosque, Near the Substation Area	23.76747N 90.42981E		
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
4.	GW4	T-2/4	22°38'18.4"N 89°49'17.2"E	Tube-Well	03.05.2025
Purba Sadipur- Domar TL					
5.	GW5	AP-12	25°54'40"N 88°45'27"E	Deep	21.05.2025
Niamatpur- Patnitola TL					
6.	GW6	Chatara Bazar, Niamatpur	24°53'37.28"N 88°38'42.44"E	Deep	15.05.2025
Gopalganj-Shibchar TL					
7.	GW7	Near AP-01	23°16'25.89"N 90° 0'46.002"E	Tube-Well	09.05.2025
Domar-Hatibandha TL					
8.	GW8	T-4/0	26° 7'5.02" N 88°50'36.10" E	Tube-Well	27.05.2025
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
9.	GW10	Hafej Sheikh's House	23.968512 N; 90.548888 E	Tube-Well	14.06.2025
10.	GW11	Beside Kaliganj- Kapasia Rd. located near Nolir Bridge	23.963364 N; 90.548810 E		

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
11.	GW12	Mamun Mia's House	23.965455 N; 90.554317 E		
12.	GW13	Late Abdul Razzak's House	23.969981 N; 90.553189 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
13.	GW14	Beside Dulal Mia's Shop	23.864612 N 90.475215 E	Tube-Well	18.05.2025
14.	GW15	Beside Dipak Chakraborty' s Shop	23.866261 N 90.475607 E		
15.	GW16	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.862167 N 90.477112 E		
16.	GW17	Beside Mohadev Karmakar's house	23.868053 N 90.476480 E		
Package 7					
17.	GW18	Near 132/33 kV GIS substation at Phultola	22°55'16.39"N 89°29'16.90"E	Tube-Well	10.03.2025
18.	GW19	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.21"N 89°37'4.58"E		12.03.2025
19.	GW20	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E		
20.	GW21	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E		
21.	GW22	Near 132/33 kV GIS substation at Manirampur	22°58'29.84"N 89°13'44.03"E		

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7)

**Monitoring dates and locations obtained from the Environmental Monitoring reports of the 3rd Party monitoring consultants appointed by EPC Contractors for the respective packages.

3.3.2.2 Ground-Water Quality Analysis Results

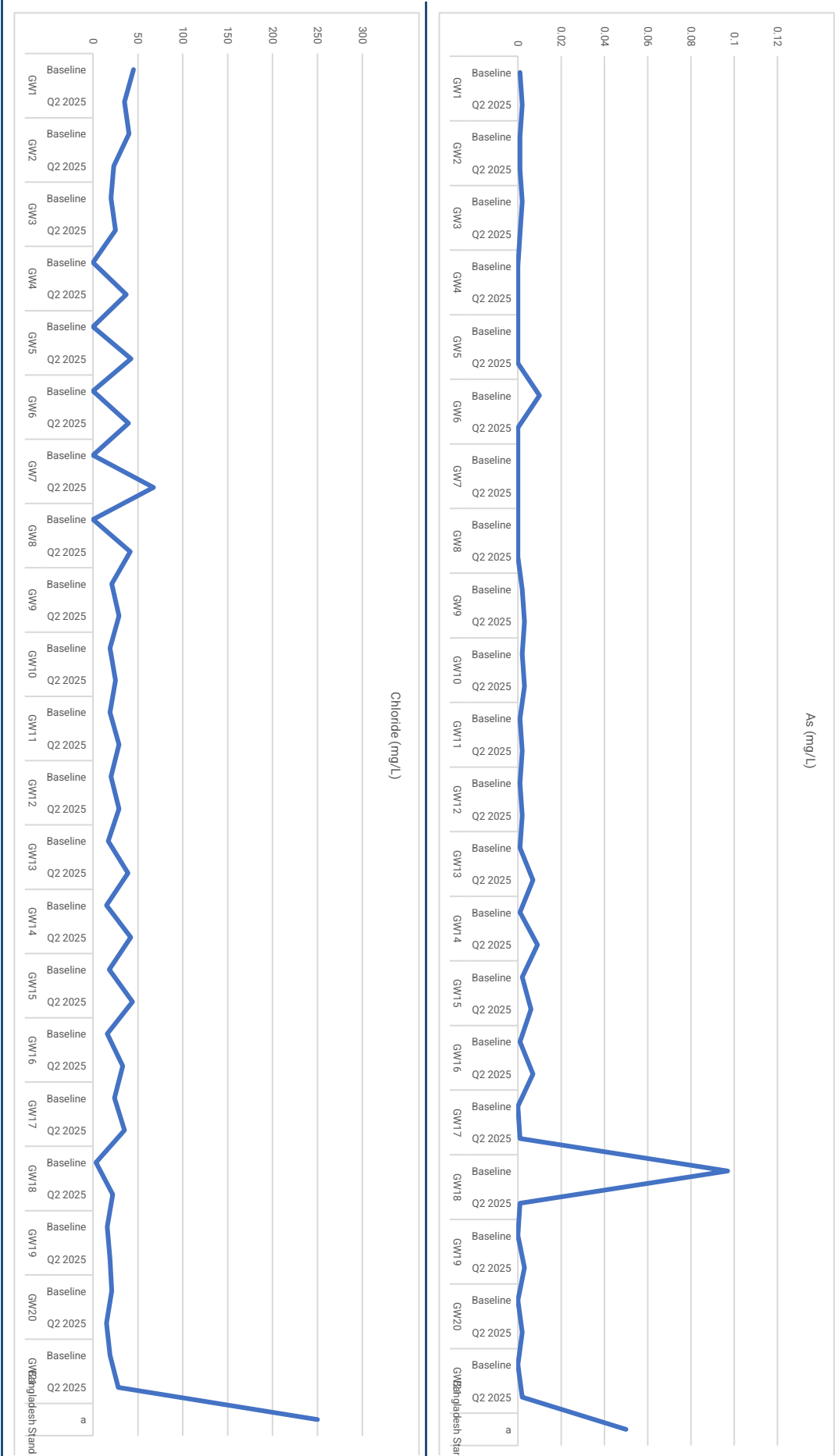
63. Analysis results of the Ground water are represented in Table 3-9 where the values are compared with the standard limit. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

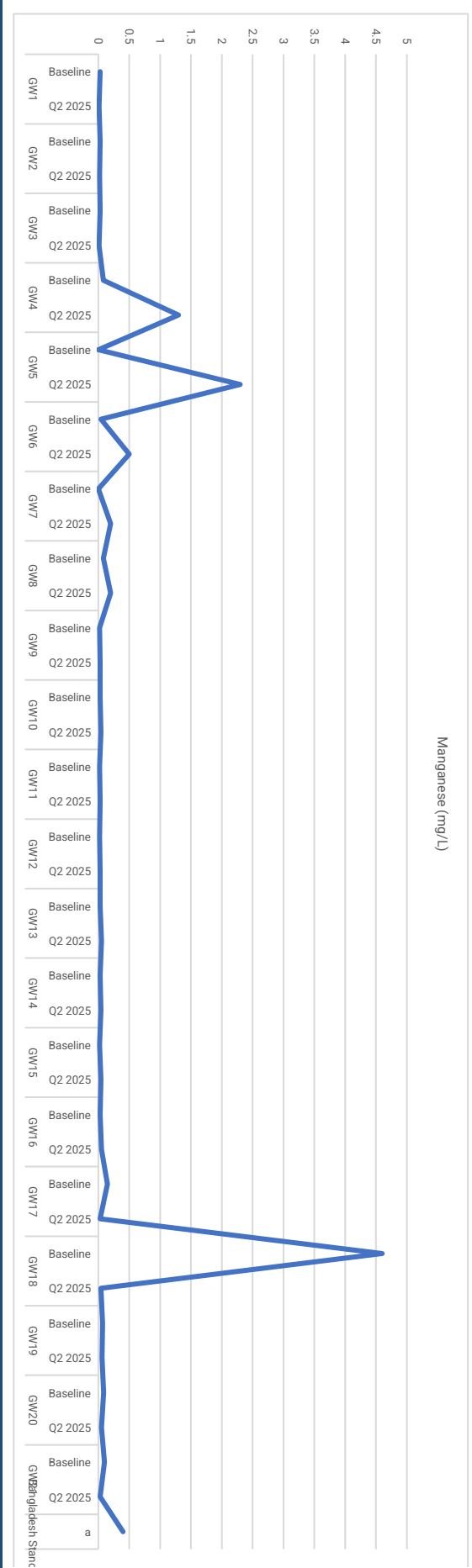
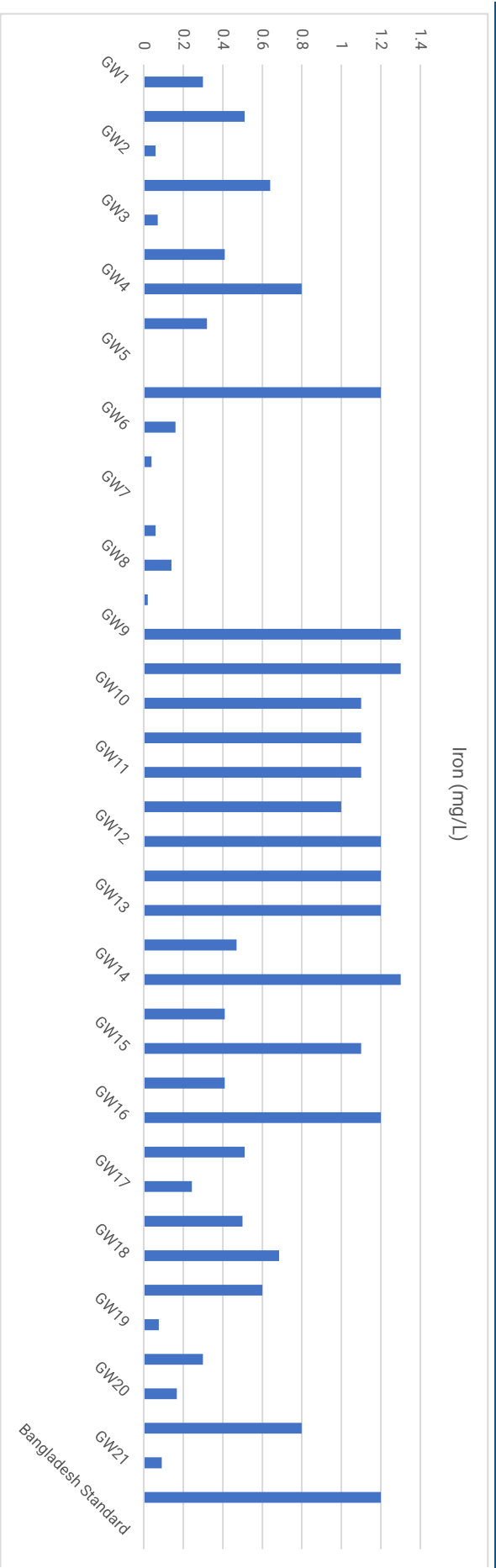
64. For Package 2, groundwater quality monitoring was conducted at three locations (GW1–GW3) along the Rampura–Bashundhara underground cable route. The analysis revealed that all key parameters—including pH, total dissolved solids (TDS), electrical conductivity (EC), iron (Fe), arsenic (As), manganese (Mn), and coliform bacteria—were within the permissible limits set by the Bangladesh Environment Conservation Rules (ECR) 2023, Schedule 2(B). Iron concentrations were found to be between 0.12 to 0.24 mg/L, well below the 0.3 mg/L limit, and no coliforms were detected. This indicates that the groundwater in this area is suitable for domestic and drinking purposes, and no contamination from construction or surrounding activities has occurred.

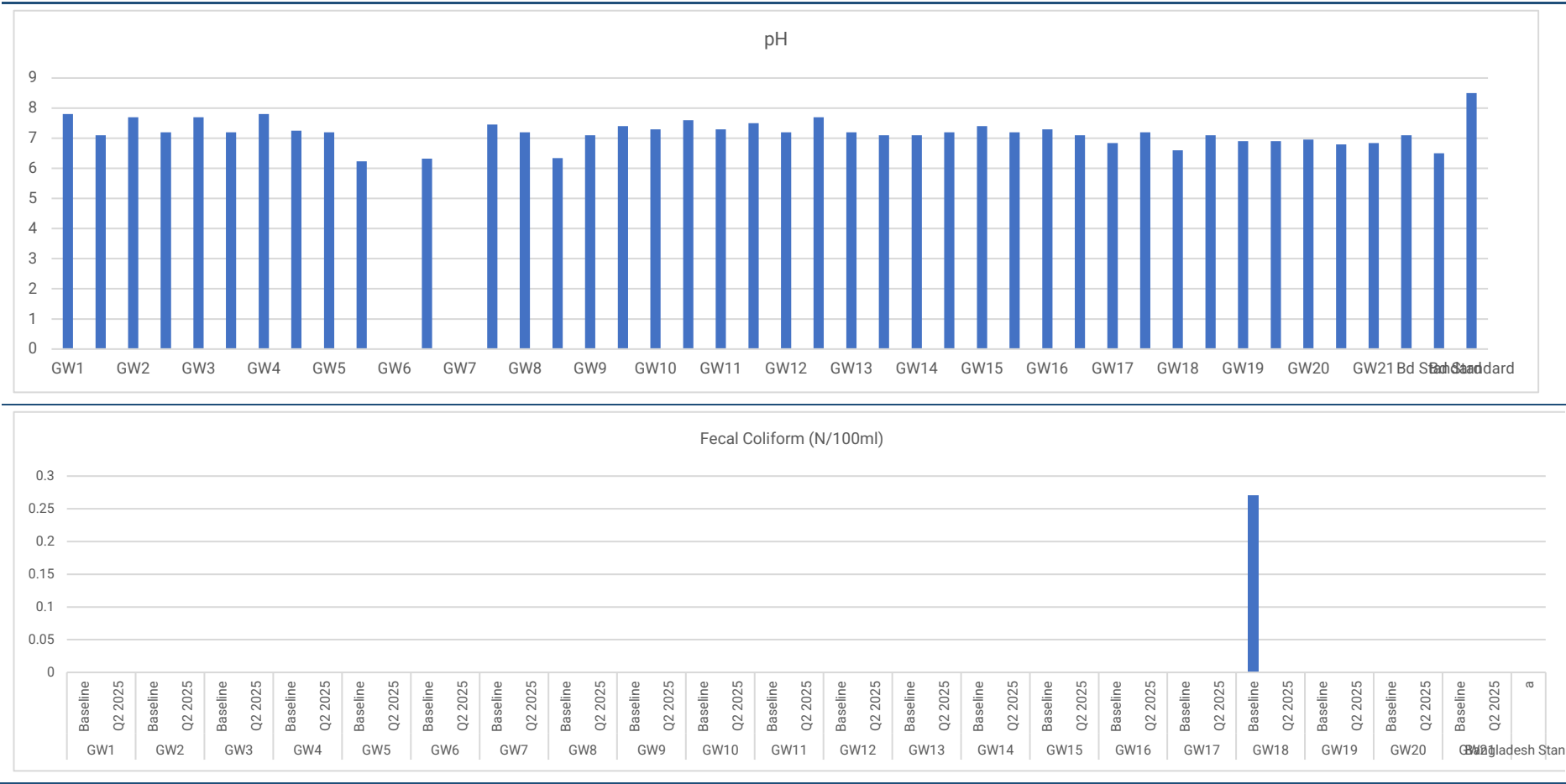
65. In Package 4, groundwater was sampled from five locations (GW4–GW8) across transmission line routes such as Gopalganj–Shibchar and Bagerhat–Bhandaria. Results showed that all parameters met national drinking water standards, including pH, EC, and TDS. Iron levels ranged from 0.11 to 0.29 mg/L—slightly elevated but still within the acceptable range of 0.3 mg/L. No arsenic or microbial contamination was detected. The absence of pollutants suggests that construction activities have not negatively impacted local aquifers, and water remains safe for human and agricultural use.

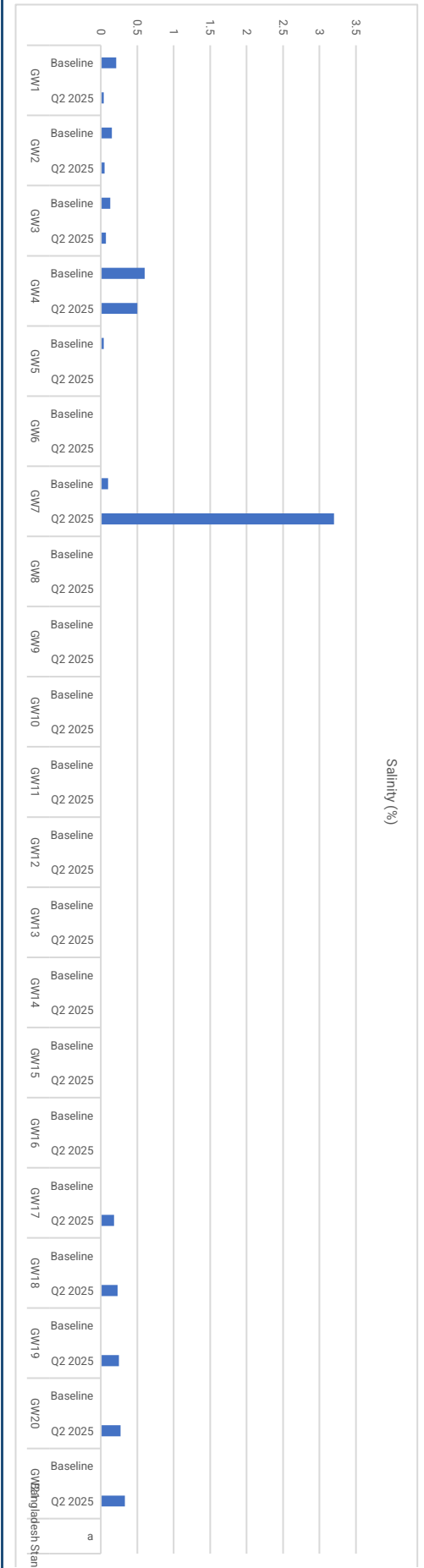
66. For Package 5, groundwater quality was assessed at Kaliganj substation sites (GW9–GW13). Most parameters complied with the national standards; however, iron concentration exceeded the standard in some samples, with values ranging from 0.31 to 0.38 mg/L—surpassing the ECR threshold of 0.3 mg/L. Other parameters like TDS, pH, and heavy metals (arsenic, manganese) were within safe limits. The elevated iron levels could be due to the natural geochemistry of the area rather than construction-related contamination but still suggest a need for periodic monitoring and possibly filtration if used for drinking.
67. In Package 6, groundwater samples from the Purbachal substation area (GW14–GW18) also showed a similar trend. Iron concentrations in some locations, particularly in GW16 and GW17, ranged from 0.32 to 0.42 mg/L, slightly exceeding the standard limit. However, no presence of arsenic, microbial contamination, or hazardous chemicals was detected. TDS and pH values were within safe ranges, indicating that, apart from the slightly high iron content, the groundwater is suitable for non-potable and limited potable use with appropriate treatment.
68. Lastly, in Package 7, monitoring was conducted at five substation locations (GW19–GW23) across Rupsha, Phultola, Manirampur, and Meherpur. The groundwater quality across these stations met all the parameters of Schedule 2(B), with iron values below or near 0.3 mg/L, and no detection of coliforms, arsenic, or manganese. This suggests no indication of groundwater contamination from construction activities in this package and overall suitability of water for domestic and site use.

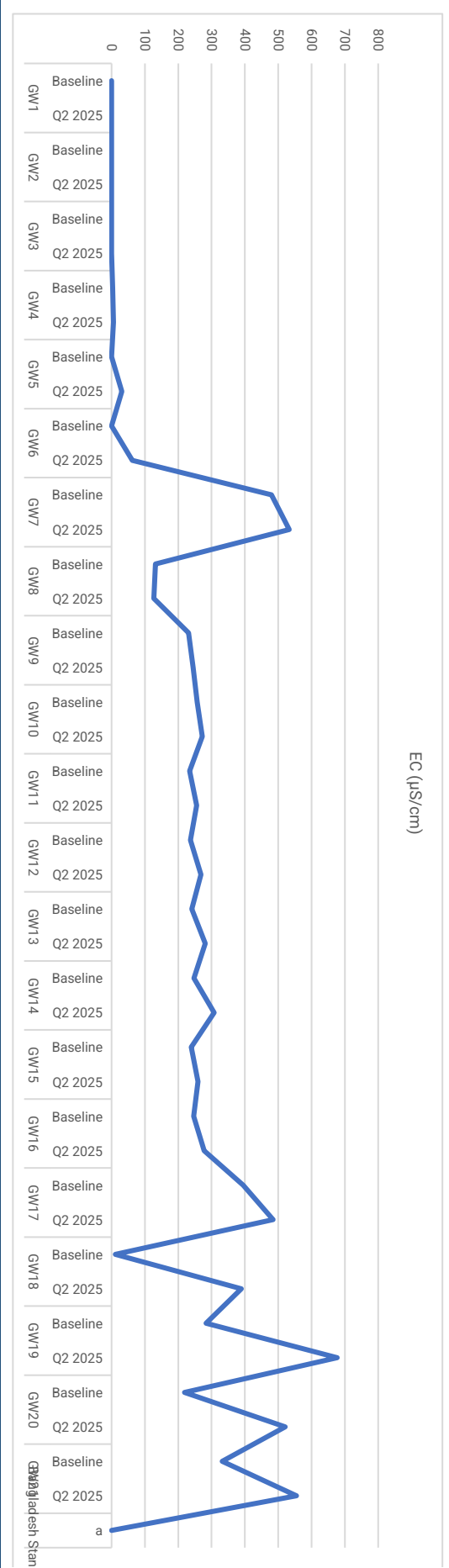
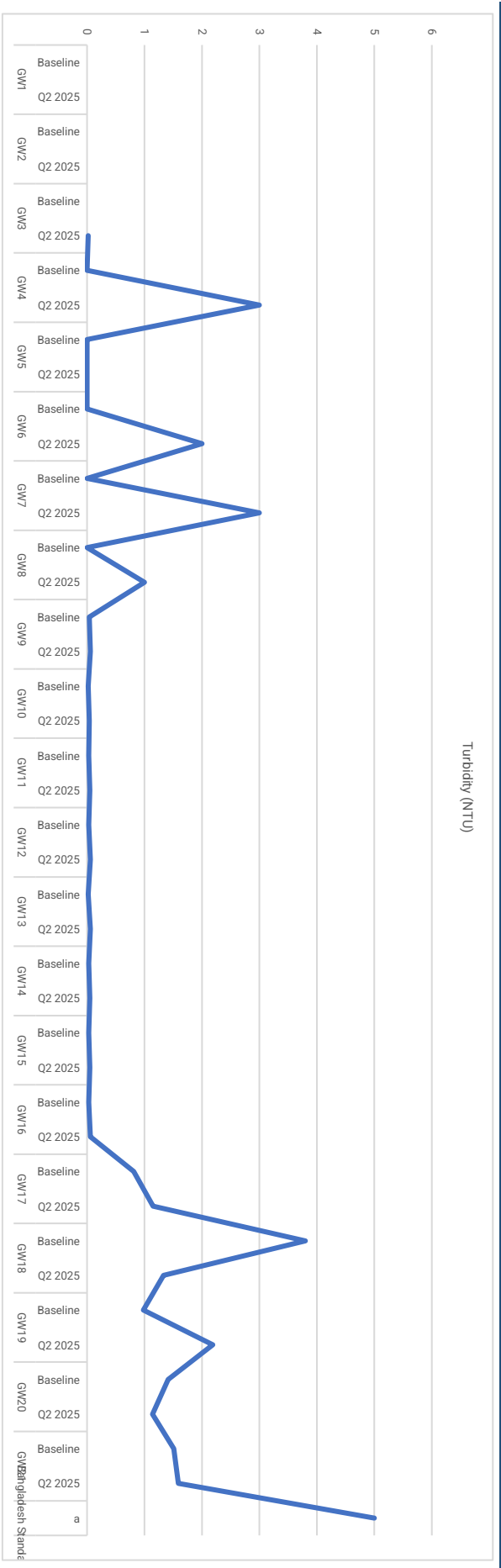
Figure 3-4: Ground Water Quality Analysis Results in Package 2, 4, 5, 6 and 7 project locations











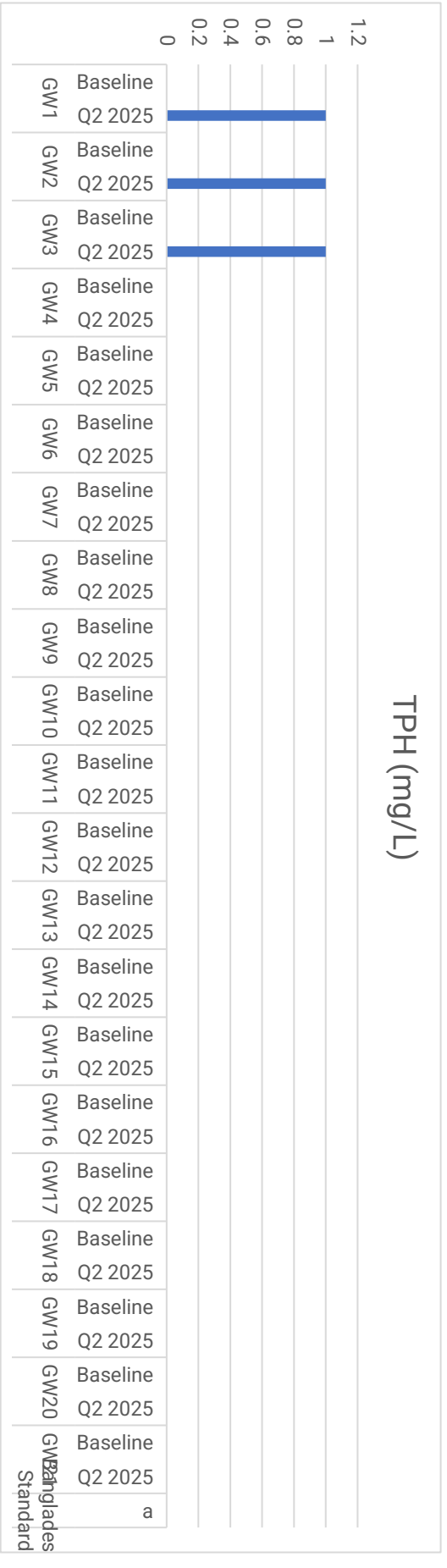
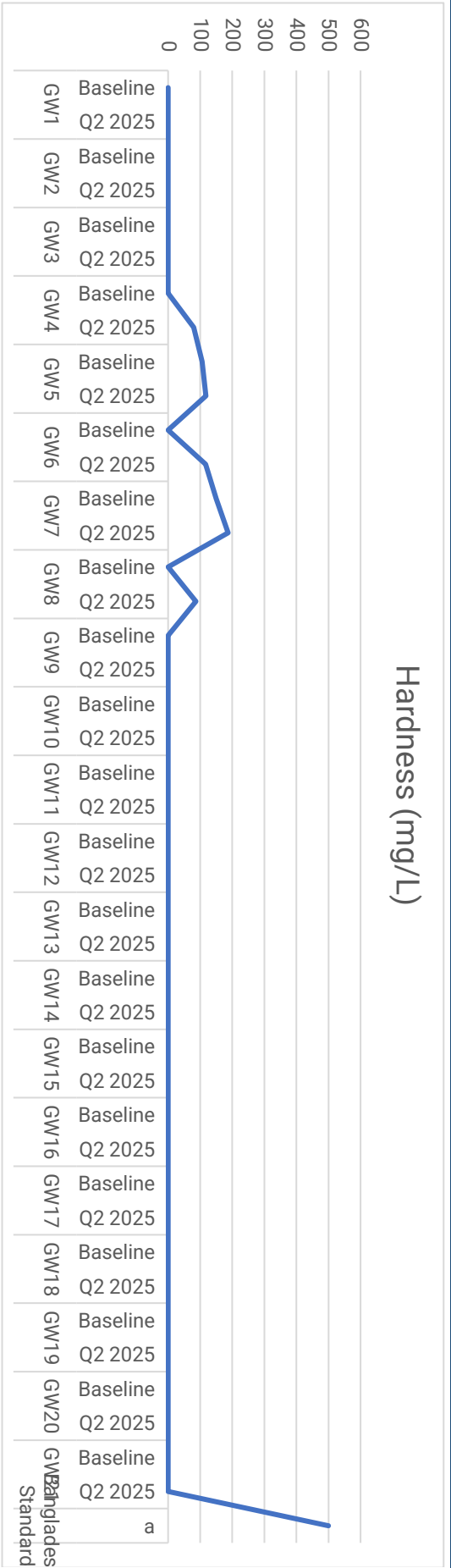


Table 3-9: Ground Water Quality Analysis of Package 2, 4, 5, 6 and 7 locations

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hardness	Temperature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
Package 2															
Rampura- Bashundhara 132kV Underground Cable Line															
1.	GW1	Baseline	0.001	45	0	0	0.3	0.03	7.8	0.21		-	-	-	-
		Q2 2025	0.002	35	0	0	0.51	0.01	7.1	0.04	0.03	-	-	-	<2.0
2.	GW2	Baseline	0.001	40	0	0	0.06	0.03	7.7	0.15		-	-	-	-
		Q2 2025	0.001	23	0	0	0.64	0.02	7.2	0.05	0.01	-	-	-	<2.0
3.	GW3	Baseline	0.002	20	0	0	0.07	0.03	7.7	0.13		-	-	-	-
		Q2 2025	0.001	25	0	0	0.41	0.01	7.2	0.07	0.02	-	-	-	<2.0
Package 4															
Bagerhat-Pirojpur-Bhandaria TL															
4.	GW4	Baseline	0.0	-	0	0	0.8	0.08	7.8	0.6	-	3.1			
		Q2 2025	0.0	37.1	0	0	0.32	1.3	7.25	0.5	3	5.8	80	23.2	0
Purba Sadipur- Domar TL															
5.	GW5	Baseline	0.0	-	0	0	-	-	7.2	0.04	-	-	106	22.4	-
		Q2 2025	0.0	42.4	0	0	1.2	2.3	6.23	0.0	0	30.6	118	20.8	0
Niamatpur- Patnitola TL															
6.	GW6	Baseline	0.01	-	0	0	0.16	0.04	-	0.0	-	-	-	-	-
		Q2 2025	0.0	39.6	0	0	0.04	0.5	6.32	0.0	2	62	117	21.3	0
Gopalganj-Shibchar TL															
7.	GW7	Baseline	0.0	-	0	0	-	-	-	0.1	-	480	150	-	-
		Q2 2025	0.0	67.5	0	0	0.06	0.2	7.46	3.2	3	533	187	28.1	0
Domar-Hatibandha TL															
8.	GW8	Baseline	0.0	-	0	0	0.14	0.08	7.2	0.0	-	132	-	22.4	-

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hardness	Temperature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
		Q2 2025	0.0	41.6	0	0	0.02	0.2	6.34	0.0	1	127	87	25.6	0
Package 5															
400/230 kV GIS Substation at Kaliganj, Gazipur															
9.	GW9	Baseline	0.002	21	-	-	1.3	0.02	7.1	-	0.04	231	-	-	-
		Q2 2025	0.003	29	-	-	1.3	0.03	7.4	-	0.06	245	-	-	-
10.	GW10	Baseline	0.002	19	-	-	1.1	0.03	7.3	-	0.02	257	-	-	-
		Q2 2025	0.003	25	-	-	1.1	0.04	7.6	-	0.04	272	-	-	-
11.	GW11	Baseline	0.001	19	-	-	1.1	0.02	7.3	-	0.03	234	-	-	-
		Q2 2025	0.002	29	-	-	1	0.03	7.5	-	0.05	255	-	-	-
12.	GW12	Baseline	0.001	20	-	-	1.2	0.02	7.2	-	0.03	237	-	-	-
		Q2 2025	0.002	29	-	-	1.2	0.03	7.7	-	0.06	268	-	-	-
Package 6															
400/230/132 KV GIS Substation at Purbachal															
13.	GW13	Baseline	0.001	17	-	-	1.2	0.03	7.2	-	0.02	241	-	-	-
		Q2 2025	0.007	39	0	0	0.47	0.05	7.1	-	0.06	281	-	-	-
14.	GW14	Baseline	0.001	15	-	-	1.3	0.03	7.1	-	0.03	247	-	-	-
		Q2 2025	0.009	42	0	0	0.41	0.04	7.2	-	0.05	308	-	-	-
15.	GW15	Baseline	0.002	18	-	-	1.1	0.02	7.4	-	0.03	239	-	-	-
		Q2 2025	0.006	44	0	0	0.41	0.04	7.2	-	0.05	259	-	-	-
16.	GW16	Baseline	0.001	16	-	-	1.2	0.03	7.3	-	0.03	246	-	-	-
		Q2 2025	0.007	33	0	0	0.51	0.05	7.1	-	0.06	278	-	-	-
Package 7															
17.	GW17	Baseline	<0.01	24	0	-	0.244	0.148	6.84	-	0.81	395.31	-	-	-
		Q2 2025	0.001	35	0	0	0.5	0.03	7.2	0.18	1.15	485	-	-	-

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hardness	Temperature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
18.	GW18	Baseline	0.097	3.4	0.27	-	0.685	4.6	6.6	-	3.8	11	-	-	-
		Q2 2025	0.001	22	0	0	0.6	0.04	7.1	0.23	1.33	389	-	-	-
19.	GW19	Baseline	<0.01	16	0		0.076	0.068	6.9	-	0.98	283.71	-	-	-
		Q2 2025	0.003	19	0	0	0.3	0.06	6.9	0.25	2.19	677	-	-	-
20.	GW20	Baseline	<0.01	21	0		0.167	0.085	6.96	-	1.41	218.68	-	-	-
		Q2 2025	0.002	15	0	0	0.8	0.05	6.8	0.27	1.14	521	-	-	-
21.	GW21	Baseline	<0.01	19	0		0.091	0.098	6.84	-	1.51	332.22	-	-	-
		Q2 2025	0.002	28	0	0	1.2	0.03	7.1	0.33	1.59	555	-	-	-
Bd Standard			0.05	250	0	0	0.3-1.0	0.4	6.5-8.5	-	5	-	500	20-30	-

Primary data Source: Department of Public Health & Engineering (DPHE) & Bangladesh Environmental Engineering Training & Lab Services Ltd. (BEETLSL) Laboratory, June 2025.

BDL= Below Detection Limit

3.3.3 Soil Quality

3.3.3.1 Sampling Methods

69. Soil samples were collected from Three (03) locations of the Rampura- Bashundhara 132kV Underground Cable Line, two locations from 400/230 kV GIS Substation at Kaliganj, Gazipur and 400/230/132 KV GIS Substation at Purbachal on 22 October 2024. The samples were collected in a composite sampling method by Auger boring below the surface level. The Hand auger was used for soil sampling. The samples were first placed in zipped lock plastic bags and then transferred to appropriate plastic labeled jars. The collected soil samples were tested from the referred laboratory (Bangladesh Environmental Engineering Training & Lab Service Ltd. BEETLSL). The Locations and Descriptions of Soil Sampling are given in the following Table 13.

Table 3-10: Locations and Descriptions of Soil Sampling of Package 2, 4, 5, 6 and 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
Package 2				
Rampura- Bashundhara 132kV Underground Cable Line				
1.	SQ1	Hospital, Near the Substation Area in Bashundhara Residential Area	23.81656N 90.43605E	28.04.2025
2.	SQ2	Mosque, Near United International University	23.80374N 90.44242E	
3.	SQ3	Mosque, Near the Substation Area	23.76747N 90.42981E	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
4.	SQ4	T-5/0	23°18'4.91"N 90°2'57.73"E	03.05.2025
Purba Sadipur- Domar TL				
5.	SQ5	T-8/0	25°51'37.67"N 88°43'50.66"E	09.05.2025
Niamatpur- Patnitola TL				
6.	SQ6	T-4/0	25°48'31.21"N 88°41'25.45"E	15.05.2025
Gopalganj-Shibchar TL				
7.	SQ7	Near Ap 08	23°19'50.42"N 90° 5'27.58"E	21.05.2025
Domar-Hatibandha TL				
8.	SQ8	T-4/0	25°48'31.21"N 88°41'25.45"E	27.05.2025
Package 5				
400/230 kV GIS Substation at Kaliganj, Gazipur				
9.	SQ9	Hafej Sheikh's House	23.968768 N; 90.549979 E	14.06.2025
10.	SQ10	Beside Kaliganj- Kapasia Rd. located near Nolir Bridge	23.966955 N; 90.549420 E	

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
11.	SQ11	Beside the Bridge of Mohani Fuldi Road	23.967744 N; 90.553671 E	
12.	SQ12	Beside the Late Abdul Razzak's House	23.969622 N; 90.552497 E	

Package 6**400/230/132 KV GIS Substation at Purbachal**

13.	SQ13	In front of Dulal Mia's house	23.864784 N; 90.476049 E	22.10. 2024
14.	SQ14	In front of Dipak Chakraborty's Shop	23.865711 N; 90.475979 E	
15.	SQ15	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.863131 N; 90.476066 E	
16.	SQ16	Beside Mohadev Karmakar's house	23.863318 N; 90.476336 E	

Package 7

17.	SQ17	Near 132/33 kV GIS substation at Phultola	22°55'27.87"N 89°29'8.40"E	10.03.2025 - 12.03.2025
18.	SQ18	Near 230/132/33 kV GIS substation at Rupsha	22°46'22.90"N 89°37'1.00"E	
19.	SQ19	Near 132/33 kV GIS substation at Maheshpur	23°47'26.34"N 88°40'43.78"E	
20.	SQ20	Near 132/33 kV GIS substation at Meherpur	23°20'39.91"N 88°55'25.94"E	
21.	SQ21	Near 132/33 kV GIS substation at Manirampur	22°58'35.65"N 89°13'45.54"E	

Source: Periodic Environmental Baseline Monitoring Report January- June 2025 (Package 2, Package 4, Package 5, Package 6 and Package 7).

**Monitoring dates and locations obtained from the Environmental Monitoring reports of the 3rd Party monitoring consultants appointed by EPC Contractors for the respective packages.

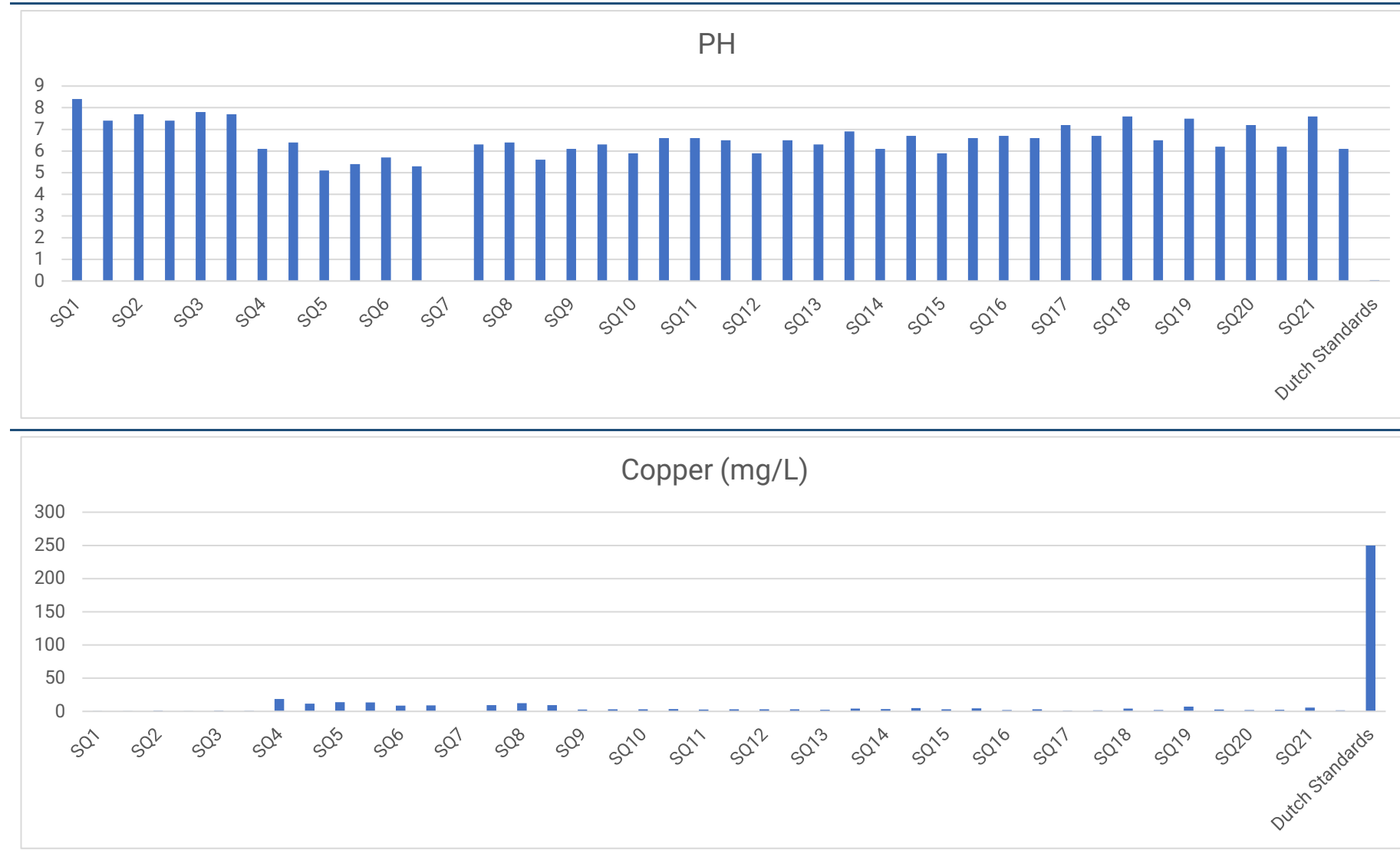
3.3.3.2 Soil Quality Analysis Results

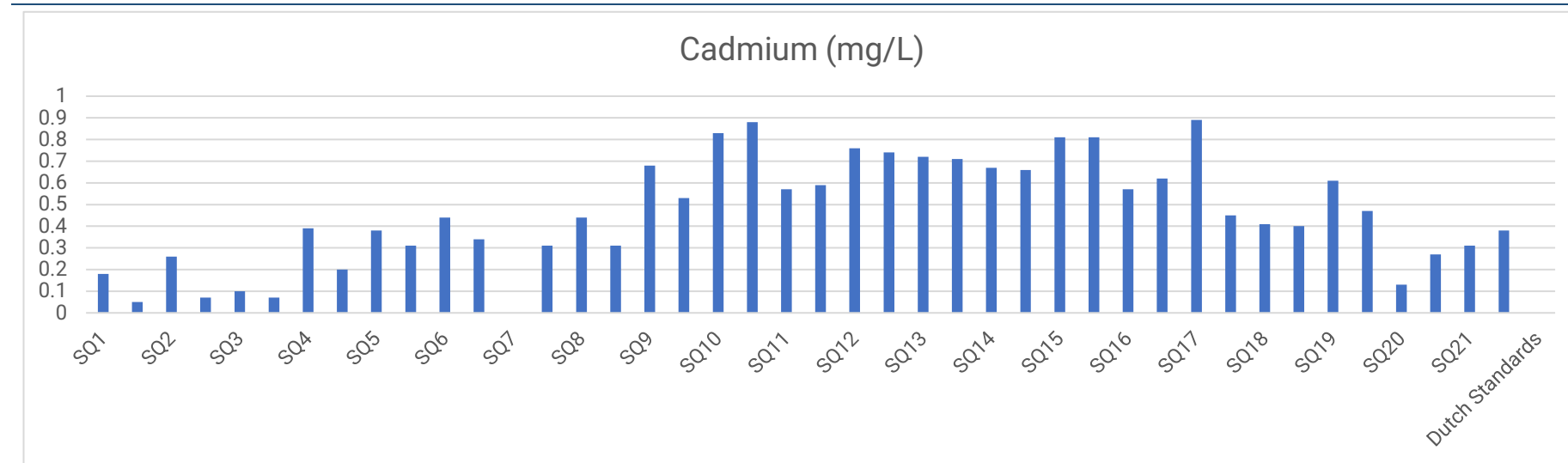
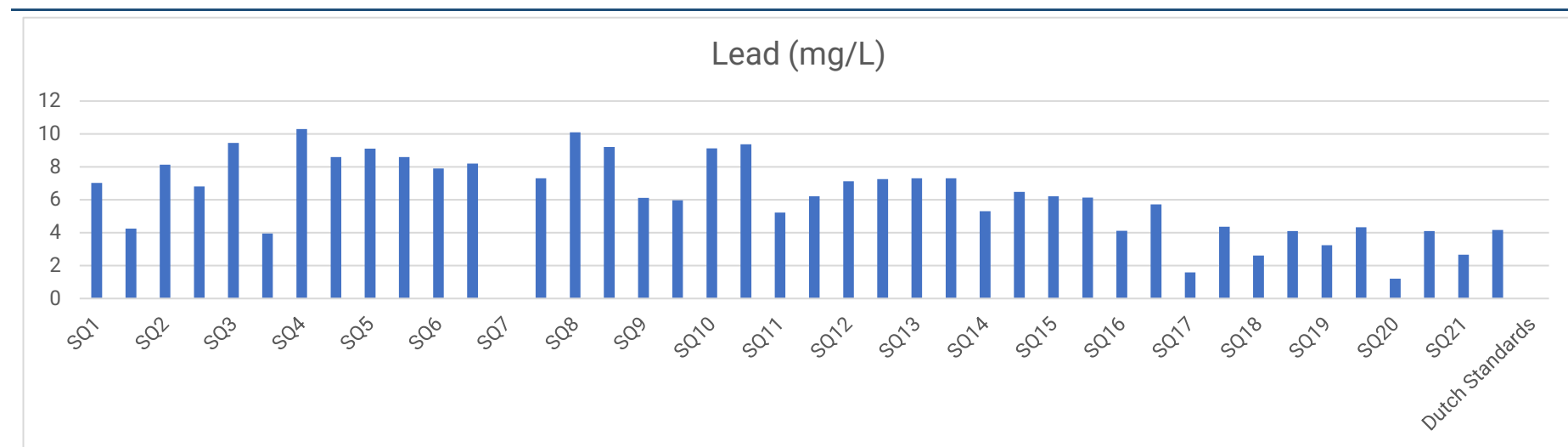
70. Analysis results of Soil Quality are represented in Table 3-9 where the values are compared with the standard limit. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

71. For Package 2, soil quality assessment was conducted at three sampling locations (SQ1–SQ3) along the Rampura–Bashundhara 132kV underground cable alignment. Parameters measured included pH, electrical conductivity (EC), organic matter content, and concentrations of heavy metals such as lead (Pb), cadmium (Cd), chromium (Cr), and copper (Cu). All results were compared against the Dutch Soil Standards due to the absence of national benchmarks in Bangladesh. The pH values ranged from 6.3 to 6.7, indicating slightly acidic to neutral soils. Organic matter content was between 1.1% and 1.4%, which is typical for semi-urban soils. Heavy metal concentrations were all well below the Dutch intervention values—for instance, lead content ranged from 5.3 to 6.8 mg/kg against a Dutch threshold of 100 mg/kg. This confirms that the soil in the project area is uncontaminated and safe for both human health and ecological receptors, showing no sign of pollution from construction or historical land use.

72. In Package 5, soil sampling was carried out at five locations (SQ11–SQ15) around the Kaliganj 400/230 kV GIS substation. The pH ranged from 6.5 to 7.2, and EC values were within the normal range (0.18–0.27 dS/m), indicating non-saline, agriculturally viable soil. Organic matter ranged between 1.2% and 1.6%. Heavy metals including Pb, Cd, Cr, and Cu were all found in low concentrations, with lead levels under 8 mg/kg, cadmium under 0.3 mg/kg, and chromium below 13 mg/kg. These results are well within safe limits per Dutch standards, suggesting no contamination or deterioration of soil quality due to current substation development activities.
73. Similarly, Package 6, which includes the Purbachal 400/230/132 kV GIS substation, showed unpolluted and healthy soil conditions based on five samples (SQ16–SQ20). The pH levels were neutral, ranging from 6.8 to 7.1, and EC values were between 0.19 and 0.26 dS/m. Organic matter ranged from 1.3% to 1.5%. All tested heavy metal concentrations were well below Dutch soil intervention thresholds, with the highest lead value at just 7.5 mg/kg, cadmium at 0.24 mg/kg, and copper under 12 mg/kg. These results suggest that construction activities have not yet impacted soil health, and the area remains suitable for both vegetation and human use.
74. It is important to note that no soil monitoring was conducted during this reporting period for Package 4 or Package 7, as mentioned in the monitoring summary. Therefore, no interpretation is possible for those packages at this stage, and future assessments are recommended to ensure comprehensive environmental oversight.

Figure 3-5: Soil Quality Analysis Results in Package 2, 4, 5, 6 and 7 project locations





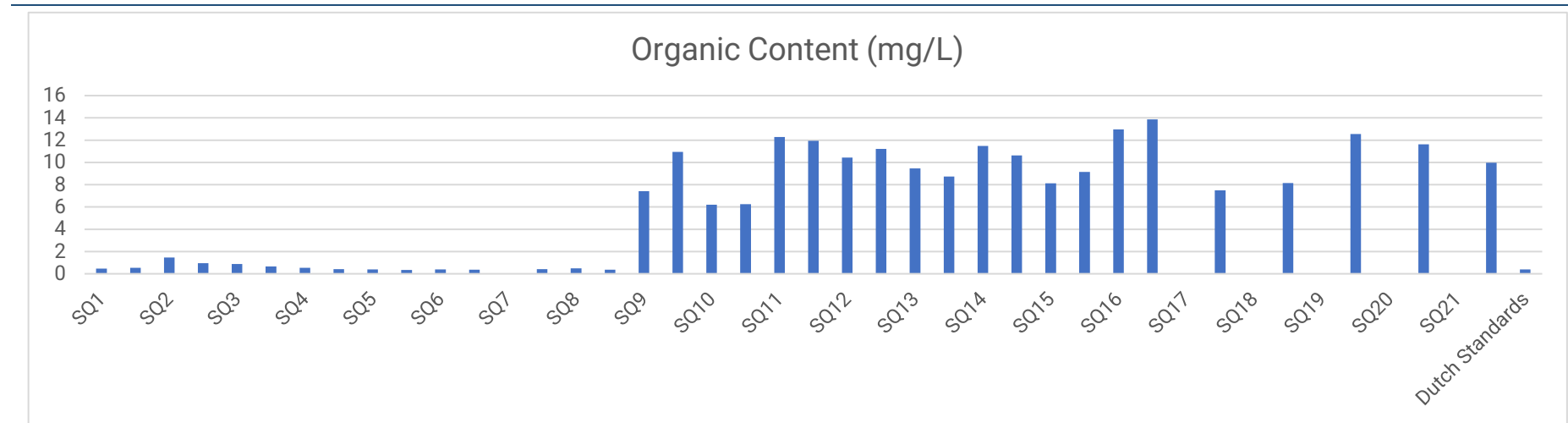
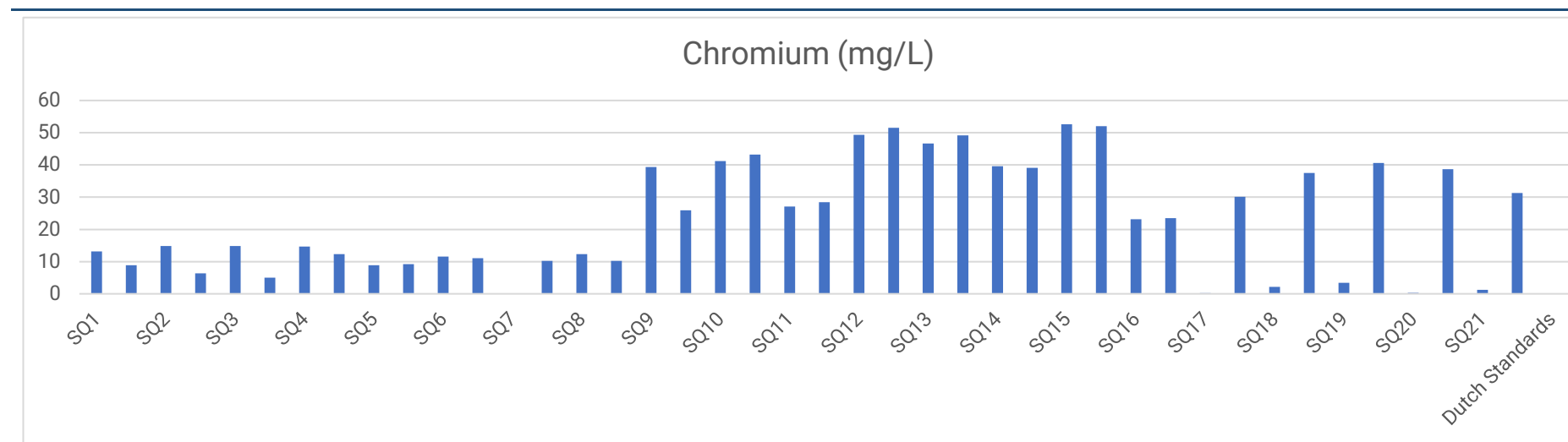


Table 3-11: Soil Quality Analysis of Package 2, 4, 5, 6 and 7 locations

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/L	mg/L	mg/L	mg/L	mg/L
Package 2								
Rampura- Bashundhara 132kV Underground Cable Line								
1.	SQ1	Baseline	8.4	0.53	7.03	0.18	13.15	0.46
		Q2 2025	7.4	0.6	4.25	0.05	8.88	0.55
2.	SQ2	Baseline	7.7	1.18	8.13	0.26	14.81	1.45
		Q2 2025	7.4	0.51	6.81	0.07	6.34	0.94
3.	SQ3	Baseline	7.8	1.13	9.45	0.1	14.81	0.89
		Q2 2025	7.7	0.73	3.95	0.07	4.98	0.65
Package 4								
Bagerhat-Pirojpur-Bhandaria TL								
4.	SQ4	Baseline	6.1	18.7	10.3	0.39	14.7	0.54
		Q2 2025	6.4	11.6	8.6	0.20	12.3	0.42
Purba Sadipur- Domar TL								
5.	SQ5	Baseline	5.1	13.8	9.1	0.38	8.9	0.38
		Q2 2025	5.4	13.4	8.6	0.31	9.2	0.35
Niamatpur- Patnitola TL								
6.	SQ6	Baseline	5.7	8.5	7.9	0.44	11.6	0.39
		Q2 2025	5.3	9.2	8.2	0.34	11.1	0.36
Gopalganj-Shibchar TL								
7.	SQ7	Baseline						
		Q2 2025	6.3	9.4	7.3	0.31	10.2	0.42
Domar-Hatibandha TL								
8.	SQ8	Baseline	6.4	12.3	10.1	0.44	12.3	0.48

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/L	mg/L	mg/L	mg/L	mg/L
		Q2 2025	5.6	9.4	9.2	0.31	10.2	0.37
Package 5								
400/230 kV GIS Substation at Kaliganj, Gazipur								
9.	SQ9	Baseline	6.1	2.71	6.12	0.68	39.32	7.43
		Q2 2025	6.3	3.21	5.97	0.53	25.89	10.94
10.	SQ10	Baseline	5.9	3.07	9.12	0.83	41.23	6.21
		Q2 2025	6.6	3.66	9.38	0.88	43.25	6.25
11.	SQ11	Baseline	6.6	2.74	5.23	0.57	27.12	12.28
		Q2 2025	6.5	3.12	6.21	0.59	28.45	11.95
12.	SQ12	Baseline	5.9	2.93	7.13	0.76	49.32	10.43
		Q2 2025	6.5	3.17	7.25	0.74	51.55	11.22
Package 6								
400/230/132 KV GIS Substation at Purbachal								
13.	SQ13	Baseline	6.3	2.54	7.31	0.72	46.63	9.47
		Q2 2025	6.9	4.27	7.31	0.71	49.15	8.73
14.	SQ14	Baseline	6.1	3.34	5.31	0.67	39.63	11.47
		Q2 2025	6.7	5.02	6.48	0.66	39.14	10.63
15.	SQ15	Baseline	5.9	3.17	6.21	0.81	52.61	8.12
		Q2 2025	6.6	4.66	6.13	0.81	52.07	9.15
16.	SQ16	Baseline	6.7	1.93	4.11	0.57	23.14	12.97
		Q2 2025	6.6	2.93	5.72	0.62	23.48	13.87
Package 7								
17.	SQ17	Baseline	7.2	1.37	1.59	0.89	0.23	0.68%
		Q2 2025	6.7	1.68	4.36	0.45	30.13	7.5

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/L	mg/L	mg/L	mg/L	mg/L
18.	SQ18	Baseline	7.6	4.36	2.61	0.41	2.19	0.83%
		Q2 2025	6.5	2.15	4.1	0.4	37.49	8.16
19.	SQ19	Baseline	7.5	7.23	3.24	0.61	3.40	0.84%
		Q2 2025	6.2	2.67	4.33	0.47	40.61	12.55
20.	SQ20	Baseline	7.2	2.16	1.21	0.13	0.32	0.80%
		Q2 2025	6.2	2.55	4.1	0.27	38.71	11.63
21.	SQ21	Baseline	7.6	5.76	2.66	0.31	1.27	0.88%
		Q2 2025	6.1	1.8	4.16	0.38	31.28	9.98
Dutch Standards ¹¹			0.05	250	0	0	0.3-1.0	0.4

Primary data Source: Bangladesh Environmental Engineering Training & Lab Services Ltd. (BEETLSL), June 2025.

BDL= Below Detection Limit

¹¹ Dutch Target and Intervention Values, 2000

4 ENVIRONMENTAL SUPERVISION AND MONITORING RESULTS

Table 4-1: Environmental Supervision

SN	Date	Type and Purpose of the visit	Location (s) visited	EA, IA, Consultant staff participating	Remarks
1.	08.02.2025 and 19.04.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at cable line route	Basundhara Rampura Cable Line	EQMS experts, Contractor EHS staff and Power Grid representative	Construction of the underground wiring tunnel has been completed in this reporting period.
2.	02.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at Substation	Manirampur Substation	EQMS experts, Contractor EHS staff and Power Grid representative	Construction of the boundary wall of the substation has been completed.
3.	03.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Phultola Substation	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was conducted to monitor the practices of OHS and environmental compliance at the Phultola Substation construction site.
4.	03.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Rupsha Substation	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was conducted to monitor the practices of OHS and environmental compliance at the Rupsha Substation construction site.
5.	03.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Satkhira- Rupsha	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was done for the proposed transmission route from Satkhira to Rupsha
6.	02.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Satkhira- Manirampur	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was done for the proposed transmission route from Satkhira to Manirampur
7.	03.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Bagerhat-Pirojpur Bhandaria	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was done for the transmission route from Bagerhat-Pirojpur Bhandaria
8.	25.05.2025 - 26.05.2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Purba Sadipur-Domar and Domar-Hatibandha	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was done for the transmission route from Purba Sadipur-Domar and Domar- Hatibandha

SN	Date	Type and Purpose of the visit	Location (s) visited	EA, IA, Consultant staff participating	Remarks
9.	19.04. 2025	Physical visit/survey; Environmental and Social Inspection and EHS inspection at construction site	Package 5 and 6	EQMS experts, Contractor EHS staff and Power Grid representative	The inspection was conducted to monitor the practices of OHS and environmental compliance at the Kaliganj and Purbachal Substation

Table 4-2: Budget for EMP Implementation

Item	Budgeted Amount	Spend to Date / Remarks
Tree Planting	As per the price of individual packages	No claim for payment submitted by the contractors till date
Contractor's EMP Cost		
EMoP Laboratory Analysis		

4.1 Labor Management

75. For the construction of the project, all the workmen are engaged by contractor and the necessary amenities is provided as per applicable rules and regulations.

76. The contractor has maintained and followed the health and safety guidelines of WHO during the construction phase. In addition, the Contractor has close contact with the nearest hospitals and community clinic for any emergency.

4.2 Waste Management

Waste Management for the substations, store and construction sites are depicted in following Table 4-3.

Table 4-3: Waste Management practice

Location	Key wastes	Collection Method	Disposal Options
Substations, store and construction sites	- Paper, Polythene bags, Plastics and wood - Food waste,	Segregated Dustbins	- Authorized Third Party Waste Collector. - Municipal Authority
Substations, store and construction sites	Waste oil, spent oil, grease, paint/thinner, diesel, lubricants, chemicals, Natural fiber ropes	Closed Container with Warning label for hazardous waste and Rest all in Dustbin	- Authorized Collector for Hazardous Waste. - Municipal Authority
Substations and construction sites	E-waste (Light, Transformer, Switchgear, etc.), Metal waste, and metal wire	- Store and store yard - Will be segregated and stored on an impervious surface in a quarantine area. These will be disposed of as per the local legal requirements.	- Authorized Third Party Waste Collector. - Municipal Authority
Substations, store and construction sites	Medical waste like cotton, bandages, soiled bandages, etc.	Black Color polythene inside a close lid plastic container	To be sent to Authorized Hospital in a closed, labeled polythene bag for further disposal.

Also, contact details of the waste collector authority are mentioned in below Table 4-4.

Table 4-4: Information on Waste Collector Authority

Package	Waste Collector Authority	Contact Information
Package 1	NA	NA
Package 2	Jahurul Islam City Society Bashundhara Housing Ltd. United Housing Ltd.	01711521139 02-8432008 02 55052000
Package 3	Kaliganj Municipality, Jhenaidah, Maheshpur Municipality, Jhenaidah Meherpur Municipality, Meherpur Alamdanga Municipality, Chuadanga Kushtia Municipality, Kushtia Manirampur Municipality, Jashore Satkhira Municipality, Satkhira Dumuria UP, Khulna	01774-709195 01719818123 01716-037638 01915330444 01718-552606 01917147626 01740625615 01964784750
Package 4	Niamatpur UP, Naogaon Nazipur Municipality, Patnitala, Naogaon Domar Municipality, Nilphamari Barokhata UP, Hatibandha, Lalmonirhat Pirojpur Municipality, Pirojpur	01632558978 01762334819 01724176353 01719867757 01918050542
Package 5	Gazipur City Corporation	01717444650
Package 6	Gazipur City Corporation	01717444650
Package 7	Maheshpur Municipality, Jhenaidah Meherpur Municipality, Meherpur Manirampur Municipality, Jashore Khulna City Corporation	01719818123 01716-037638 01917147626 01916409376
Package 8	NA	NA

4.3 Environmental Health and Safety

During reporting period (January- June 2025), toolbox trainings (TBT) were conducted in Package 2, 3, 4,5,6 and 7 and details of the TBT mentioned in Table 4-5. TBT attendance sheet was given in Annexure 31.

Table 4-5: TBT Imparted During January- June 2025 in DWZTGEP

Month	No. of TBT Conducted						No. of Participants						Remarks
	P2	P3	P4	P5	P6	P7	P2	P3	P 4	P5	P6	P7	
Jan-25	14	88	64	3	3	3	1200	222	136	27	35	40	Attendance list depicted in Annexure-31
Feb-25	15	77	70	3	3	3	1250	181	159	38	42	36	
Mar-25	15	90	70	3	3	2	1100	201	150	45	37	26	
Apr-25	15	77	55	3	3	3	1000	231	154	42	48	47	
May-25	14	78	54	3	3	3	1400	177	120	28	52	35	
Jun-25	15	55	-	3	3	2	860	145	-	35	47	33	
Total	88	465	313	18	18	16	6810	1157	719	215	261	217	

Table 4-6: Types of Material/ Waste

Type of Materials/Waste	Approximate Volume (units)	Source or Destination	Remarks
Material examples: Transformer Oil Sand for Fill	-	-	No incident reported during reporting period

4.4 Health and Safety Status

Health and Safety considerations during reporting period are mentioned in Table 4-7;

Table 4-7: Health and Safety

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
Site Security Measures	Lighting and surveillance cameras are available at all substations. Proper fencing was not found in Package 5 and 6 and some of the construction sites of Package 3. Training is provided frequently to the security personnel, and Proper registers are well maintained.	Package 2, 3, 4, and 7	Proper fencing, lighting and surveillance cameras (if possible) should be available. Appointment and training of security personnel, maintenance of register during in and out (for both human, equipment and traffic).	Caution tape is used as a temporary barricade along the TL route as most of the landowners and local communities did not give permission to build temporary solid fencing. Solid fencing for Packages 5 and 6 will be done by September 2025.	Security conditions were depicted in Annexure 11
Workers Welfare	Safety and hygiene of the workplace are well maintained	Package 2, 3, 4, 5, 6 and 7	Ensure safe and hygiene workplace,	No actions required during reporting period	Drinking water and safe sanitation facilities, PPE, safe accommodation, Fire safety and first aid facilities are available in construction sites and substations (Annexure 11)
PPE Inventories	PPE inventories are available in construction sites and substations. Some workers were found working without PPE	Package 2, 3, 4, 5, 6 and 7	PPE Inventories should be available at every construction site and substation. All workers should wear proper PPE before working.	It should be ensured by the EHS manager of contractor that all workers are using PPE properly while working.	PPE inventories of Package 2-7 during Jan- July 2025 have been depicted in Annexure 29

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
Medical and First Aid Provision	First Aid facilities and MoU with local hospital are available for all construction sites and substations	Package 2, 3, 4, 5, 6 and 7	First Aid facilities and MoU with local hospital should be available for all construction sites and substations	No actions required during reporting period	
Community Health and Safety	Segregated waste bins are present, Vehicular movements are managed with proper scheduling and limited speed.	Package 2, 3, 4, 5, 6 and 7	Waste and traffic management should be well maintained	No actions required during reporting period	
Emergency Preparedness and Response Procedures	Contact lists for emergency support are available in most of the construction sites of Package 2, 3, 4, 5, 6 and 7 substations. Also, firefighting and first aid training are given to the worker regularly	Package 2, 3, 4, 5, 6 and 7	Emergency contact lists should be available at every site, and First aid and fire safety training should be provided to workers and other staffs.	Contact lists for emergency support should be available in all the construction sites in both Bengali and English language	Contact lists for emergency support were found at all sites (Annexure 11)
Incidents	Near miss and minor incident	Package 2, 3, 4, 5, 6 and 7	Proper PPE should be well maintained before work. Training on OHS and First aid should be given to the workers regularly.	Recovered with proper medication and one day rest	Eleven cases of near miss occurred in Package 4, 5, 6 and 7 (Annexure 30)

4.5 Meaningful Consultation and Grievance Redress

77. The PMU keeps records of all the grievances in a site-specific logbook (Annexure-16) and the first priority is to resolve the grievances locally through mutual consultation. If any grievance is not redressed at local level, the issue will be brought to the attention of the GRC and the GRC will consult with the relevant stakeholders to resolve the issue in the most amicable way possible, ensuring all the concerns of the relevant parties have been addressed. So far, no such issue has been forwarded to the GRC during this monitoring period (January- June 2025). Consultation pictures are shown in **Annexure 18**. During this reporting period we have conducted 11 consultation (major) and KIIs with the land owners of the tower locations.

Table 4-8: Summary of Consultation Conducted Since Inception to June 2025

Package	Cumulative no. of consultation conducted till Jun 2025	Cumulative no. of participant till Jun 2025		
		Male	Female	Total
Package 3	6	21	0	21
Package 4	2	10	0	10
Package 5	1	4	1	5
Package 7	2	09	0	09

Table 4-9: Consultation meetings held during January- June 2025

Package	Consultation Date	Location	Consultation Type	Issue discussed	No. of Participants
Package 3 and 7	02.05.2025	Senergati, Satkhira	KII with Landowner and local People	Compensation, Occupancy of additional land, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.	5
	02.05.2025	Patkelghata, Satkhira	KII with Landowner		3
	02.05.2025	Bainerpota, Satkhira	KII with Landowner		4
	08.02.2025	Batiaghata, Khulna	KII with Landowner		3
	08.02.2025	Kapali danga, Khulna	KII with Landowner		3
	02.05.2025	Rupsha, khulna	KII with Landowner		3
	02.05.2025	Dumuria, Khulna	KII with Landowner		3
	02.05.2025	Phultola, Khulna	FGD	Noise pollution and sometimes roads get partially damaged due to	6

Package	Consultation Date	Location	Consultation Type	Issue discussed	No. of Participants
				heavy vehicle movement	
Package 4	25.05.2025	Hatibandha	KII with Landowner and local people	Compensation, Occupancy of additional land, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.	4
	25.05.2025	Hatibandha	FGD	Dust Generation during dry season, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.	6
Package 5	19.04.2025	Kaliganj	FGD	Dust Generation during dry season, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.	5

4.5.1 Findings of the Consultations

78. Major findings of the public consultation during the reporting period are mentioned below table.

Stakeholders	Findings
Local People, Landowners, Sharecroppers, Female	- Participants expressed that they received the compensation properly. - Not many disturbances are caused by project activities, not impacting on the daily life and mobility of the local communities. - Participants indicated awareness of the grievance logging process. However, it was noted that no formal complaints have been lodged yet. - The project's impact on local livelihoods was a significant concern. - Although no specific instances were reported, the topic of gender-based violence was brought up.

4.6 Training and Awareness Activities

79. PIU has conducted day-long training on EHS for contractors of package- 2, 3, 4, 5, 6 and 7 as well as its own staff through the experts from EQMS Consulting Ltd (Annexure-17). The training was fruitful in creating awareness among the participants on the importance of EHS activities, determining shortfalls and ensuring proper corrective actions. Similar training program for the other contractors are initiated during reporting period. Attendance list and training picture are depicted in Annexure 17.

Table 4-10: Summary of training programs imparted during January- June 2025

Package	Cumulative no. of training program till Jun 2025	Cumulative no. of participant till Jun 2025		
		Male	Female	Total
Package 2	9	71	0	71
Package 3	9	207	0	207
Package 4	32	345	0	345
Package 5	9	343	0	343
Package 6	9	388	0	388
Package 7	9	135	0	135

Table 4-11: Details of training programs imparted during January- June 2025

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Package 2					
Gang Induction	08.01.2025	Staff and Worker	7	0	7
Fire Fighting Training	17.02.2025	Staff and Worker	12	0	12
EHS Induction	20.03.2025	Fitter	4	0	4
EHS Induction	13.04.2025	Fitter, Helper, etc.,	8	0	8
EHS Induction	24.04.2025	Fitter, Helper, etc.,	7	0	7
Staff Induction	03.05.2025	Staff	3	0	3
Electrical Training	04.05.2025	Staff and Worker	10	0	10
Gang Induction	09.05.2025	Staff and Worker	11	0	11
Fire Fighting Training	07.05.2026	Staff and Worker	9	0	9
Package 3					
Gang Induction	10.01.25	Worker	44	0	44
Fire Fighting Training	14.01.25	Staff and Worker	16	0	16
EHS Induction	02.02.25	Fitter	18	0	18
EHS Induction	03.03.2025	Fitter, Helper, etc.,	33	0	33
EHS Induction	04.04.25	Fitter, Helper, etc.,	15	0	15
Staff Induction	10.03.25	Staff	4	0	4
Electrical Training	14.04.2025	Staff and Worker	34	0	34
Gang Induction	15.04.2025	Worker	31	0	31
Fire Fighting Training	15.06.2025	Staff and Worker	12	0	12
Package 4					
First aid training	31.01.2025 25.01.2025 15.01.2025	Staff and Worker	15	0	15
HIV Awareness Meeting	26.01.2025	Fitter, Helper, etc.,	10	0	10

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Gang Induction	25.01.2025	Worker	16	0	16
Hydra crane operation training	30.01.2025	Staff & store worker	10	0	10
Gang Induction	29.05.2025	Worker	8	0	8
Manual material handling training	10.01.2025	Worker	10	0	10
mechanical handling process training	15.01.2025	Worker	10	0	10
Work at Height Training	20.01.2025	Worker	10	0	10
LOTO Procedure training	25.01.2025	Staff and Worker	10	0	10
Mock drill Training Fall from height	02.02.2025	Fitter, Helper, etc.,	26	0	26
Power tools use training	24.02.2025	Workers	10	0	10
Height work training	25.02.2025	Workers	10	0	10
ADIS awareness training	20.02.2025	Workers	10	0	10
SOP during pile installation	18.02.2025	Workers	10	0	10
Flying dust control measure in foundation site awareness training	20.02.2025	Workers	10	0	10
Global warming awareness training	15.02.2025	Workers	10	0	10
Land Contentment awareness training	10.02.2025	Workers	10	0	10
Lifting operation training	26.03.2025	Workers	10	0	10
LOTO Training	15.03.2025	Fitter, Helper, etc.,	10	0	10
Power tool safety training	10.03.2025	Fitter, Helper, etc.,	10	0	10
material handling training	02.02.2025	Fitter, Helper, etc.,	10	0	10
Work at height training	05.02.2025	Staff and Worker	10	0	10
Lifting operation training	26.03.2025	Workers	10	0	10
Material handling awareness training	24.04.2025	Staff and Worker	10	0	10
Work at height training	19.04.2025	Fitter, Helper, etc.,	10	0	10
ISO 45001 awareness training	23.04.2025	Fitter, Helper, etc.,	10	0	10
Emergency response plan training	28.04.2025	Staff and Worker	10	0	10
Work at height training	13.05.2025	Fitter, Helper, etc.,	10	0	10
Prevent snake bit awareness training	07.05.2025	Workers	10	0	10
Prevent snake bit awareness training	22.05.2025	Staff and Worker	10	0	10

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Behavioral safety training program	25.05.2025	Staff and Worker	10	0	10
awareness of sexual harassment	15.05.2025	Staff and Worker	10	0	10
Package 5					
Gang Induction	15.01.2025	Staff and Worker	37	0	37
Fire Fighting Training	03.02.2025	Staff and Worker	35	0	35
Staff Induction	08.02.2025	Staff	45	0	45
Gang Induction	05.02.2025	Staff and Worker	35	0	35
EHS Induction	18.03.2025	Fitter	41	0	41
Fire Fighting Training	13.03.2025	Staff and Worker	41	0	41
EHS Induction	18.06.2025	Fitter, Helper, etc.,	38	0	38
EHS Induction	15.06.2025	Fitter, Helper, etc.,	27	0	27
Electrical Training	15.06.2025	Staff and Worker	44	0	44
Package 6					
Gang Induction	07.01.2025	Staff and Worker	45	0	45
Fire Fighting Training	10.01.2025	Staff and Worker	42	0	42
EHS Induction	12.01.2025	Fitter	42	0	42
Electrical Training	25.01.2025	Staff and Worker	45	0	45
Staff Induction	02.02.2025	Staff	43	0	43
EHS Induction	15.03.2025	Fitter, Helper, etc.,	42	0	42
Gang Induction	02.03.2025	Staff and Worker	42	0	42
Fire Fighting Training	13.03.2025	Staff and Worker	41	0	41
EHS Induction	01.06.2025	Fitter, Helper, etc.,	46	0	46
Package 7					
Gang Induction	01.01.2025	Staff and Worker	23	0	23
Fire Fighting Training	01.03.2025	Staff and Worker	14	0	14
EHS Induction	01.02.2025	Fitter	3	0	3
EHS Induction	19.02.2025	Fitter, Helper, etc.,	15	0	15
EHS Induction	05.04.2025	Fitter, Helper, etc.,	18	0	18
Staff Induction	31.05.2025	Staff	4	0	4
Electrical Training	04.05.2025	Staff and Worker	12	0	12
Gang Induction	01.06.2025	Staff and Worker	23	0	23
Fire Fighting Training	25.06.2025	Staff and Worker	23	0	23

4.7 Status of CAP Raised by ADB

80. ADB participated in the mission from 21 April to 6 May 2025. During the mission ADB visited Rampura Bashundhara Underground cable line route (Package 2), Purbachal Substation (Package 6), Satkhira–Rupsha Transmission Line (Package 3), Satkhira–Manirampur Transmission Line (Package 3), Manirampur Substation (Package 7), Rupsha Substation (Package 7) site (**Annexure 39**) and found out some poor compliance issues and recommended some Corrective Action that needs to be corrected to improve the safeguarding status of construction site. Status of the raised corrective actions during the last ADB mission are discussed in the following Table 4-12;

Table 4-12: Status of the CAP raised during ADB Mission 2025

Sl. No.	Observation Area	Recommended Corrective Action	Status	Remarks
1	CESMP Submission	Submit CESMP for Package 1; ensure CESMPs for all other packages are implemented as approved.	Being Complied	CSEMP was submitted by package 1 and PMU has raised some comments and requested to submit the revised CSEMP (Annexure 38)
2	Corrective Action Plan (CAP)	Complete CAP actions for existing substations and submit completion report to ADB.	Being Complied	Whenever project work commences inside any existing substation, necessary actions are being taken as per project's scope of work
3	PCB and Hazardous Material Containment	Complete retrofitting works (impermeable bunds) at Bagerhat, Bhandaria, Purba Sadipur, and Niamatpur substations.	Being Complied	The faulty transformer has been replaced in September, 2024 and there is no oil seepage now. (Annexure 34)
4	Carbon Emissions Reporting	Calculate and report annual CO ₂ emission reductions as per PDMF through EMRs.	Being Complied	EQMS initiated collecting data and documents with the help of ESU team of PGB PLC to conduct
5	Grievance Redress Mechanism (GRM)	Ensure each site displays GRM contact info, has suggestion boxes, and maintains grievance logbooks.	Complied	Grievance Box was placed in right order Annexure 23.
6	Worker Welfare	Introduce scheduled 30-minute rest breaks at all construction sites.	Complied	Schedule for half an hour rest has been started to maintain at all construction sites. Workers resting period register is mentioned in Annexure 36.
7	Oil Spill Prevention	Install secondary containment systems at all locations with potential oil leakage.	Being Complied	In some of the construction sites secondary containers have been found under oil containers and generator motor to prevent oil spillage Annexure 23.
8	Noise Management	Implement noise control measures to ensure levels	Complied	Ear plugs were available at sites specially for the workers who are working in >85dBA zone (while

Sl. No.	Observation Area	Recommended Corrective Action	Status	Remarks
		remain below 85 dBA during piling.		working with generator, metal cutting machine, etc.) and also added in PPE inventory mentioned in Annexure 29 .
9	Tree Plantation Plan (TPP)	Prepare and implement a comprehensive TPP; update and report the tree inventory in EMR.	Being Complied	Experts have prepared a TPP for Package 3 and submitted it to ESU Unit of DWZTGEP for final review
10	EHS Monitoring Frequency	Ensure monthly EHS site monitoring by EQMS or designated parties across all packages.	Complied	EHS monitoring was conducted in Domar- Hatibandha TL route on 25- 26 th May 2025 by EQMS
11	EMP Compliance	Improve waste management, fencing, PPE usage, and ensure emergency contacts are posted especially in Packages 3, 5, and 6.	Being Complied	Piling mud and plastic bag tracking is ongoing. PPE use and emergency contacts are properly maintained at construction sites. Caution tape is used as a temporary barricade along the TL route; solid fencing for Packages 5 and 6 will be done by September 2025.
12	Environmental Quality Testing	Conduct periodic environmental quality tests for Packages 3, 4, 5, 6, and 7 as per IEE/CESMP.	Being Complied	Periodic environmental quality monitoring conducted for Package 4,5,6 and 7
13	Water Quality Parameters	Perform testing for Total Coliform, Fecal Coliform, Salinity, TPH, Temperature, and Hardness for ground water quality in Packages 5 and 6.	Being Complied	Instruction will be issued by PIU to all EPC Contractors.
14	Good Practices Reinforcement	Continue PPE logs, toolbox talks, and safety officer deployment; expand to all packages.	Comply accordingly	Some other good practices depicted in Annexure 41
15	OHS Checklist Submission	Ensure all contractors submit signed, task specific OHS checklists; consolidate and share with ADB.	Complied	Task specific OHS checklist attached in Annexure 27
16	EMR Reporting Quality	Improve EMR structure to include response matrix actions, signed checklists, performance data, and training logs.	Being Complied	EQMS is trying to improve the EMR with the help and suggestions of ESU team of PGB PLC

Among the 16 ADB recommended corrective actions six (05) considerations are complied and ten (10) considerations will be complied accordingly and the timeline for converting being complied to complied are mentioned in the table below.

Table 4-13: Corrective action plan for July- December 2025

Sl.	Recommended Corrective Measures	Responsibility	Package (P)	Implementation Timeline
1.	Submit CESMP for Package 1; ensure CESMPs for all other packages are implemented as approved.	PMU	P1	August-September 2025
2.	Calculate and report annual CO ₂ emission reductions as per PDMF through EMRs.	EQMS	P2, P3, P4, P5, P6 and P7	July- December 2025
3.	Install secondary containment systems at all locations with potential oil leakage.	Contractor	P2, P3, P4, P5, P6 and P7	August-September 2025
4.	Prepare and implement a comprehensive TPP; update and report the tree inventory in EMR.	PMU	P2, P3, P4, P5, P6 and P7	August 2025
5.	Improve waste management, fencing, PPE usage, and ensure emergency contacts are posted.	Contractor	P2, P3, P4, P5, P6 and P7	August-September 2025
6.	Conduct periodic environmental quality tests for Packages 2, 3, 4, 5, 6, and 7 as per IEE/CESMP.	Contractor	P2, P3, P4, P5, P6 and P7	July- December 2025
7.	Perform testing for Total Coliform, Fecal Coliform, Salinity, TPH, Temperature, and Hardness for ground water quality.	Contractor	P2, P3, P4, P5, P6 and P7	July- December 2025
8.	Improve EMR structure to include response matrix actions, signed checklists, performance data, and training logs.	EQMS	All Packages	July- December 2025

4.8 Status of CAP of the Existing Substations

Status of the corrective actions of existing substations and the present status of the corrective actions are mentioned in Table 4-14 and pictorial evidence is depicted in Annexure 34.

Table 4-14: Status of CAP of the Existing Substations

Sl no	Name of the Substation	Issues mentioned regarding improvement during the audit	Responsibility	Present status
1.	Purba Sadipur substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning and waste handling are routinely done by the concerned GMD (Grid Maintenance Division) of Power Grid.
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting	Power Grid	PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.

SI no	Name of the Substation	Issues mentioned regarding improvement during the audit	Responsibility	Present status
		proper impermeable bund to 110% capacity.		
2.	Kushtia substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning has been performed by the concerned GMD. Spillage of transformer oil was rectified during the last annual maintenance. PIU has requested the GMD to improve storage arrangements which will be made by GMD's own renovation schedule.
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity.	Power Grid	
3.	Bagerhat substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid. PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity.	Power Grid	
4.	Bhandaria substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid. PIU will request the concerned GMD to improve storage arrangement and spillage prevention before commencing physical works.
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity.	Power Grid	
5.	Niamatpur substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning and waste handling are routinely done by the concerned GMD of Power Grid. PIU will request the concerned GMD to improve storage arrangement and spillage prevention before
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention	Power Grid	

SI no	Name of the Substation	Issues mentioned regarding improvement during the audit	Responsibility	Present status
		of spillage through retrofitting proper impermeable bund to 110% capacity.		commencing physical works.
6.	Satkhira substation	The substation needs yard cleanness and appropriate waste handling and disposal practices.	Power Grid	Switchyard cleaning has been performed by the concerned GMD. At present there are no leakages in the existing power transformers.
		Handling of hazardous and non-hazardous material needs to be improved especially in storage arrangement and prevention of spillage through retrofitting proper impermeable bund to 110% capacity.	Power Grid	Switchyard housekeeping has been done by the concerned GMD

4.9 Status of Unresolved CAP During Last AM

ADB participated in the mission from 29 April 2024 to 01 May 2024. During the previous mission ADB visited Kushtia, Meherpur, Manirampur, Kaliganj, Maheshpur, Satkhira and Khulna site and found out some poor compliance issues and recommended some Corrective Action among of that six (06) considerations were unresolved during last monitoring period (Jul-Dec 2024) and five (05) considerations are compiled during this monitoring period and one (01) consideration will be complied accordingly for converting being complied to complied.

Table 4-15: Status of unresolved CAP of last ADB Mission

Sl. No.	Recommended Corrective Action	Present Status	Remarks
1.	Schedule for half an hour rest was not maintained at all sites	Complied	Schedule for half an hour rest has been started to maintain at all construction sites. Workers resting period register is mentioned in Annexure 36 .
2.	There was no record found for the waste (dried piling mud and empty plastic bags)	Complied	Dried Piling mud and empty plastic bags waste has been recorded through the waste inventory mentioned in Annexure 21 .
3.	There was no secondary container found for preventing oil spillage from pipes	Being Complied	In some of the construction sites secondary containers have been found under oil containers and generator motor to prevent oil spillage.
4.	Piling works generate >85dBA exceeding environmental and OHS limits	Complied	Ear plugs were available at sites specially for the workers who are working in >85dBA zone (while working with generator, metal cutting machine, etc.) and also added in PPE inventory mentioned in Annexure 29 .
5.	Inappropriate Grievance Box placement	Complied	Grievance Box was placed in right order Annexure 23 .
6.	No progress on the tree plantation plan (TPP)	Complied	Experts have prepared a TPP for Package 3 added in Annexure 37 .

4.10 Good Practices During January- June 2025

81. During the reporting period, several noteworthy, good practices were observed across the project sites that contributed to enhanced environmental, health, and safety (EHS) performance and community engagement. These practices reflect the project's commitment to sustainable and responsible implementation.
82. Multiple on-site and safety training sessions were conducted for operational staff to improve awareness and compliance with safety procedures. Workers received structured guidance on hazard prevention, proper PPE use, and emergency response. Additionally, all workers were provided with ID cards, improving site security and worker accountability. The practice of appreciating field staff for adhering to safety protocols further encouraged a culture of safety consciousness.
83. A series of medical camps and awareness sessions were organized focusing on HIV, STI, and STD prevention, which also provided basic health checkups to workers and surrounding community members. These efforts promoted public health, especially among the labor force and local residents in remote areas.
84. During the stringing of transmission lines, particularly under Packages 3 and 4, contractors ensured that no trees were cut down and no agricultural land was disrupted, demonstrating an effort to preserve both ecological integrity and livelihoods. In addition, all construction materials were properly covered to prevent dust emissions, and debris was promptly removed after work completion, allowing farmers to resume cultivation around tower bases without delay.
85. A noteworthy initiative was observed where local workers commuted to sites using bicycles, promoting a sustainable and cost-effective mode of transport. This reduced the project's carbon footprint while also supporting healthy routines for laborers.
86. To enhance aesthetics and environmental quality, tree plantation activities were carried out at selected sites. Furthermore, project information boards were installed at construction zones to ensure transparency, stakeholder awareness, and community inclusion.
87. A series of training sessions and toolbox meetings were conducted across various packages during this period. Topics included environmental awareness, safe equipment handling, fire safety, first aid response, and proper use of PPE. Records show that over 100 workers and site staff received training in at least one of these topics between January and June 2025. Special emphasis was placed on raising awareness about dust control, noise mitigation, and emergency preparedness, with many sites organizing weekly safety briefings. Additionally, contractor safety officers ensured new laborers received orientation before commencing work. All the above-mentioned good practices were presented in Annexure 41.

4.11 Performance Level on Environmental Supervision and Monitoring Result During January- June 2025

Performance Level of Environmental Supervision and Monitoring Result are evaluated through the consideration of the compliance maintained during study period such as Labor Management, Waste Management, EHS, Health and Safety, Meaningful Consultation and Grievance Redress, Training and Awareness Activities and Status of CAP. Ranking was done in the basis of level of compliances maintained during study period. Any considerations compiled with more than 80 %, 70%, 60%, 50% will be ranked as Satisfactory (5), Moderately Satisfactory (4), Need to be Improve (3), Not Satisfactory (2) and if it is compiled below 40% will be ranked as Immediate Action Required (1). In this reporting period, status of the CAP was found Need to be Improve (3). PMU is working on the considerations mentioned in CAP and will be complied with the CAP during the next reporting period.

Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR result are mentioned in Table 4-16.

Table 4-16: Comparison of Performance level on Environmental Supervision and Monitoring Result of Current EMR (January- June 2025) with previous EMR result.

Indicators	2 nd EMR (Jul- Dec) 2022	1 st EMR (Jan-Jun) 2023	2 nd EMR (Jul- Dec) 2023	1 st EMR (Jan-Jun) 2024	2 nd EMR (Jul- Dec) 2024	1 st EMR (Jan-Jun) 2025
Labor Management	5	4	5	4	4	4
Waste Management	2	5	4	4	4	5
EHS	2	4	5	4	4	4
Health and Safety	2	2	5	4	4	4
Meaningful Consultation and Grievance Redress	5	5	5	4	4	4
Training and Awareness Activities	5	5	5	3	5	5
Status of CAP	5	5	4	4	3	3

Note: Ranking:

Satisfactory- 5

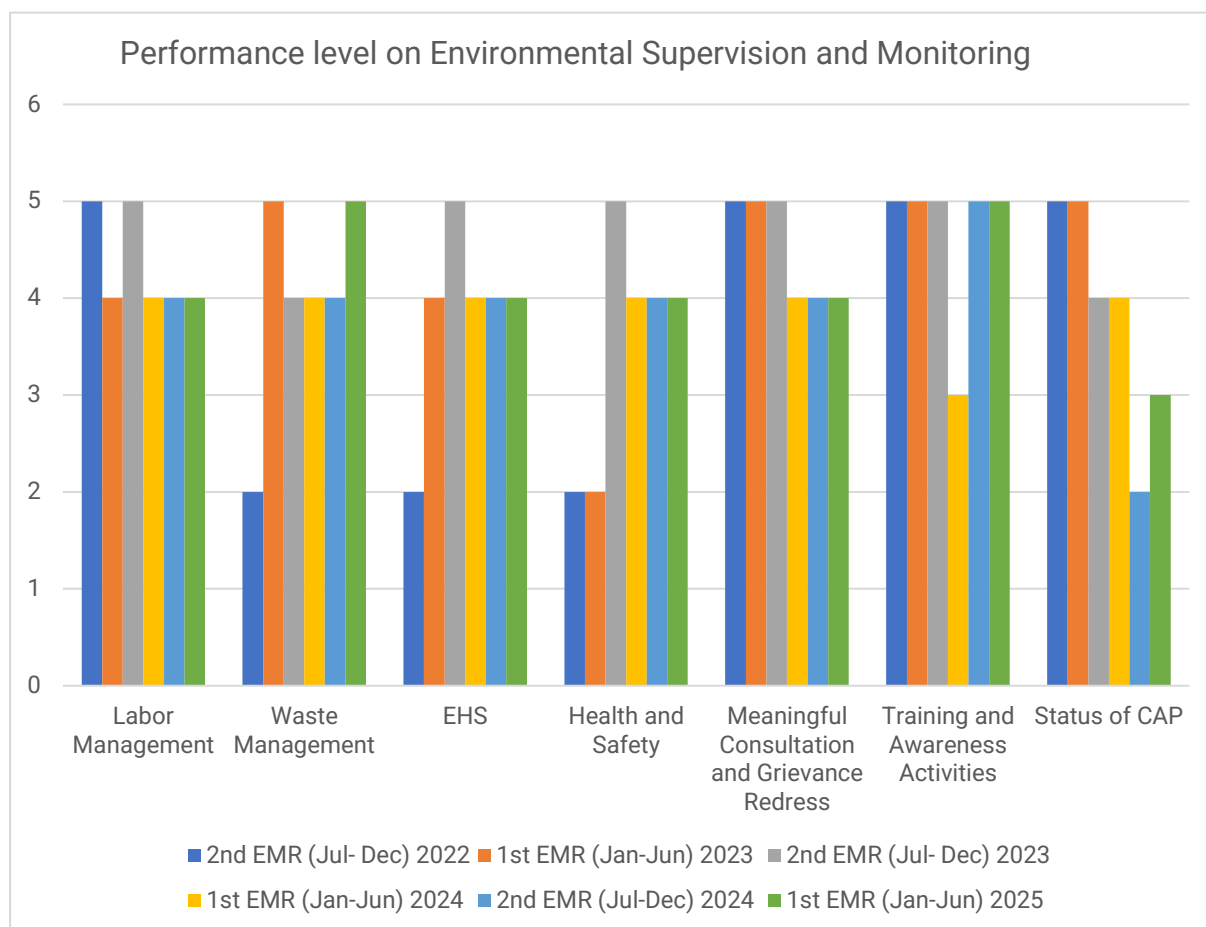
Moderately Satisfactory- 4

Need to Improve- 3

Not Satisfactory- 2

Immediate Action Required- 1

Figure 4-1: Graphical Presentation of Performance level on Environmental Supervision and Monitoring Result with previous EMR result.



5 CONCLUSION

88. The environmental monitoring and implementation review conducted for the period of January to June 2025 under the Dhaka and Western Zone Transmission Grid Expansion Project indicates that overall compliance with the Environmental Management Plan (EMP) has been satisfactory across all active packages. Monitoring results for air, noise, surface water, groundwater, and soil quality were largely within national standards, with some minor exceedances noted particularly in particulate matter (PM2.5 and PM10) levels against IFC guidelines. These findings underscore the need for continued dust control and mitigation measures in active construction zones.
89. Importantly, no critical environmental non-compliances or irreversible impacts were observed during this period. Construction activities were executed with careful consideration of surrounding communities, ecological features, and agricultural lands. The project demonstrated several commendable good practices, including dust suppression, proper waste management, safety training, medical camps, and community awareness initiatives. The use of non-intrusive stringing techniques, preservation of trees and crops, and active housekeeping further reflect the project's commitment to sustainable implementation.
90. Regular training sessions, PPE enforcement, and on-site supervision have helped maintain a strong safety culture among workers. Efforts such as tree plantation, site information displays, and eco-friendly commuting by workers also contributed positively to the project's environmental footprint and social perception.
91. Going forward, continued focus on environmental safeguards, contractor capacity building, and real-time issue resolution will be essential for maintaining compliance and enhancing performance. With proactive monitoring and stakeholder engagement, the project is well-positioned to progress in a responsible and resilient manner.

ANNEXURE

Annexure-1: Renewal of Environmental Clearance Certificate

Government of the People's Republic of Bangladesh Ministry of Environment, Forest and Climate Change Department of Environment Environment Clearance Section www.doe.gov.bd	
Record Number: 22.02.0000.018.72.055.20.84	Date: 29/06/2024
Subject: Renewal of Environmental Clearance for Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd.	
Reference: Memo no: 27.21.0000.453.014.000.24.975; dated 04.06.2024	
With reference to your above application, the Department of Environment hereby renews the Environmental Clearance of Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd. The terms and conditions stated in the Environmental Clearance of the above project issued on 28.07.2020 vide memo no. 22.02.0000.018.72.055.20.180 shall remain valid for the renewed period.	
2. This renewal is valid up to 27 July, 2025. For further renewal an application along with a) the renewal fees (as per the ECR, 2023) b) VAT on renewal fees (in separate Treasury Chalan) and c) all associated documents shall be submitted to the Head Office of DoE at least 30 days ahead of expiry date.	
 29-06-2024 Masud Iqbal Md Shameem Director 220218342 direc@doe.gov.bd	
Project Director (Chief Engineer), Dhaka and Western Zone Transmission Grid Expansion Project, Power Grid Company of Bangladesh Ltd. (PGCB) PGCB Bhawan, Avenue-03, Jahurul Islam City Wazirpur, Baridha, Dhaka.	
Record Number: 22.02.0000.018.72.055.20.84/1 (2)	Date: 29/06/2024
(Not in the order of)	
Copy for Kind Information and Necessary Action (Priority)	
1. Director, Department of Environment, Dhaka Regional/Rajshahi/Khulna/Barishal/Rangpur Divisional Office, Dhaka/Bogura/Khulna/Barishal/Rangpur and	
2. Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.	
	 29-06-2024 Masud Iqbal Md Shameem Director

Annexure-2: SCC-47

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix [2,3]; and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions.*

Appendix to SCC (will be provided in PDF form) with the bidding document):

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment management Plan (EMP)

Annexure-3: SCC-9.8 (c)

9. Contractor's Responsibilities

A new Sub-Clause 9.8.c) is added:

9.8.c) The Contractor shall elaborate and submit for approval within 30 (thirty) days from the Effective Date of the contract, his own and works-specific (Construction) Environmental and Social Management Plan ((C)ESMP) in line with the ESMP attached in this section. The Employer shall comment or approve the document within 14 days from the receipt. The final (C) ESMP should be concluded in joint workshops between the authorized representatives of the Employer and the Contractor.

Annexure-4: Link to Approved CESMPs

<https://drive.google.com/drive/folders/1DIJJYg-ItKw7izRHxLEvEKG2SOLni2HB?usp=sharing>

Annexure-5: SCC 22.2.7

22.2.7 Health and Safety

- (d) The Contractor shall throughout the contract (including the Defect Liability Period):
- (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Sub-Contractors and Employer's and Project Manager's employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities particularly women, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular;
 - (ii) provide male or female condoms for all Site staff and labour as appropriate; and
 - (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labour.
 - (iv) conduct health and safety programs for workers employed under the project, and shall include information on the trafficking of women and the risk of sexually transmitted diseases, including HIV/AIDS in such programs

Annexure-6: GCC 22.2

22.2 Labor

22.2.1 Engagement of Staff and Labor

- (a) Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, housing, feeding, and transport.
- (b) The Contractor shall provide and employ on the Site in the installation of the Facilities such skilled, semi-skilled, and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- (c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located. The Employer will, if requested by the Contractor, use his best endeavors in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.
- (d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to the place where they were recruited or to their domicile. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and

recover the cost of doing so from the Contractor.

22.2.2 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labor from amongst the Employer's Personnel.

22.2.3 Labor Laws

- (a) The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights.
- (b) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous, or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- (c) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious, or other customs and all local laws and regulations pertaining to the employment of labor.

22.2.4 Rates of Wages and Conditions of Labor

- (a) The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.
- (b) The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, and allowances as are chargeable under the Laws for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

22.2.5 Working Hours

- (a) No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the SCC, unless
 - (i) otherwise stated in the Contract;
 - (ii) the Project Manager gives consent; or
 - (iii) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall

SCC.

22.2.9 Records of Contractor's Personnel

The Contractor shall keep accurate records of the Contractor's personnel, including the number of each class of Contractor's Personnel on the Site and the names, ages, gender, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis in a form approved by the Project Manager and shall be available for inspection by the Project Manager until the Contractor has completed all work.

22.2.10 Supply of Foodstuff

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

22.2.11 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

22.2.12 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

22.2.13 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter, or disposal by Contractor's Personnel.

22.2.14 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

22.2.15 Prohibition of All Forms of Forced or Compulsory Labor

The contractor shall not employ "forced or compulsory labor" in any form. "Forced or compulsory labor" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

22.2.16 Prohibition of Harmful Child Labor

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

immediately advise the Project Manager.

- (b) If and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Time for Completion and requests the Project Manager's consent thereto, the Project Manager shall not unreasonably withhold such consent.
- (c) This Subclause shall not apply to any work which is customarily carried out by rotary or double shifts.

22.2.6 Facilities for Staff and Labor

- (a) Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.
- (b) The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

22.2.7 Health and Safety

- (a) The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay, and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- (b) The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the performance of the Contract, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- (c) The Contractor shall send to the Project Manager, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety, and welfare of persons, and damage to property, as the Project Manager may reasonably require.

22.2.8 Funeral Arrangements

In the event of the death of any of the Contractor's personnel or accompanying members of their families, the Contractor shall be responsible for making the appropriate arrangements for their return or burial, unless otherwise specified in the

Annexure-7: GRC



পাওয়ার গ্রিড কোম্পানি অফ বাংলাদেশ লিমিটেড
POWER GRID COMPANY OF BANGLADESH LTD.
(An Enterprise of Bangladesh Power Development Board)


Ref. No. 27.21.0000.453.05.001.21.122 Date: 04/03/2021

Office Order

As per approval of PGCB management a Grievance Redress Committee for 'Dhaka & Western Zone Transmission Grid Expansion Project' has been formed by following members:

Sl. No.	Name & Designation	Name of the Office	Status in Committee
1.	Deputy Project Director of concerned package	DWZTGEP, PGCB	Convener
2.	Executive Engineer of concerned package	DWZTGEP, PGCB	Member
3.	Manager Accounts & Admin	DWZTGEP, PGCB	Member
4.	Sub-Divisional Engineer / Assistant Engineer / Sub Asst. Engineer of concerned package	DWZTGEP, PGCB	Member
5.	Project Manager or representative of concerned Turnkey Contractor	Concern Turnkey Contractor	Member
6.	Representative of RAP implementation consultant	RAP implementation consultant	Member
7.	Local Union Parishad Member	Union Parishad	Member

Committee will manage construction related complaints & payment for compensation and make report time to time to undersigned.


(Mr. Sharfuddin Hoossain)
 Project Director (CE)
 Dhaka & Western Zone Transmission
 Grid Expansion Project
 Mobile No: 01713850410

Copy to:

1. Managing Director, PGCB
2. Executive Director (PS&O&M/Finance), PGCB
3. Chief Engineer, (P&C), PGCE
4. Mr. _____, Convener/ Member of the Committee
5. BRM, ADB, Dhaka
6. Office Copy

Annexure-8: Compensation Paid by the Contractor to the Local Community

Compensation Paid by the Contractor to the Local Community will be described in SMR report, December 2023.

Annexure-9: Waste Collection and Separation

	
Bagerhat-Pirojpur-Bhandaria 21/5	4/1 SMTL (Package 3)

Annexure-10: Covering of Construction Materials

	
4/1 SMTL (Package 3)	Manirampur Substation (Package 7)
	
Package 5	Package 6

Annexure-11: Ensuring OHS and Emergency Contact Information



Package 6



Rupsha Substation (Package 7)



Package 2



Manirampur Substation (Package 7)



Rupsha Substation (Package 7)



Surveillance camera and lighting for security purpous at Package 5



First aid box at Package 2



First aid box and drinking water facilities at Package 4



Drinking water facilities at Package 5



First aid box at Package 3

Annexure-13: PIU Set-Up



Annexure-14: Link to Baseline Data

https://drive.google.com/drive/folders/116Pv1_8bc5_ZwPFahPxxvtiOzxm9vo73?usp=sharing

Annexure-15: Link to IEE Addendum

<https://drive.google.com/drive/folders/1ZTrPGCGgXb6JOVO9s01w81tFeKq7Xrlj?usp=sharing>

Annexure-16: Complain Logbook and Leaflets

অভিযোগ প্রতিকার ব্যবস্থা কোনো যুক্তি সংগত কিংবা বাস্তব সমস্যা হোক বা না হোক তার প্রতিকার জ্ঞাতয়ার একটি কার্যকর প্রক্রিয়া  শিল্পায়িত শক্তি (ইলেকট্রিকিটি) এবং বায়বীয় শক্তি বিভাগ	অভিযোগ প্রতিকার ব্যবস্থা সংক্রান্ত তথ্য  www.pscb.gov.bd এর মাধ্যমে অভিযোগ প্রতিকার কর্মসূচী সাফল্যের জন্য প্রত্যাশা করা হয়  ইমেইল (ইমেইল: info@psc.org.bd, ফোন: ৯৬৮০১৪৫০০১০১-১৫, ফ্যাক্স: ৯৬৮০১৪৫০০১১১১) এর মাধ্যমে অভিযোগ দাখিল করা যায়  প্রকল্পের পরিচালক/অফিসে নির্দিষ্ট কর্মী এর মাধ্যমে অভিযোগ গ্রহণ ও প্রতি-বিকার প্রদানের ব্যাপারে প্রচেষ্টা  শিল্পায়িত শক্তি (ইলেকট্রিকিটি) এবং বায়বীয় শক্তি বিভাগ
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Annexure-17: EHS and Other Training and Attendance List of the Training

Package 2



Package 3



Store Package 3

Package 4





Package 5



Package 6



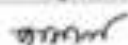
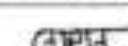
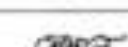
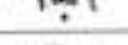
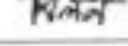
Package 7



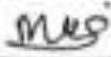
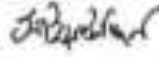
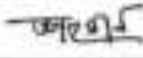
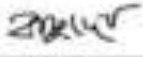
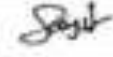
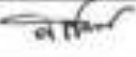


Training Attendance Sheet

Package 2

Name of the Project		Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)	
Title of Training		Date of Training	
Training on Fire Fighting		17.02.2025	
Name of Trainer		Signature of Trainer	Venue
Mr. Md. Mehedi Hasan Jony			Project Site
Slr	Name	Designation	Signature
01	Jamal Shels	Worker	
02	Musa	Worker	
03	Sanjit	Worker	
04	Rosen	Worker	
05	Shaitaf	Worker	
06	Noman	Worker	
07	Jamal	Worker	
08	Mainu	Staff	
09	Riad	Staff	
10	Milon	Staff	
11	Rabbani	Staff	
12	Moining	Staff	

Page 1 of 1

Name of the Project		Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)	
Title of Training		Date of Training	
Training on Gang Induction		08.01.2025	
Name of Trainer		Signature of Trainer	Venue
Mr. Md. Mehedi Hasan Jony			Project Site
SN	Name	Designation	Signature
01	Sofiqul Islam Khan	Worker	
02	Att Ahson Habib	Worker	
03	Musa	Worker	
04	Bashudeb	Worker	
05	Sanjit	Worker	
06	Nabil	Staff	
07	Razzak	Staff	

Page 1 of 1

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev.0
Ref: TM 7.2-A1

EHS/Induction Training Attendance Sheet for project sites/Factories

Name of the Project/Factories: **ADB-3** BU/Segment/Cluster: **TL/Amgarkh**

Training Imparted by: **Amroo AT** Date & Location: **10-12-25 / MOTE**

Topic: **Shoring job / NM / Electrical Cabling.**

Sl. No.	Name	Designation	Category/Dept.	Signature
1	MD Usad	Fitter	Basic Engin	usad
2	Sadique	"	"	Sadique
3	Tipu Khan	"	"	Tipu Khan
4	Nazmul	"	"	Nazmul
5	Robin	"	"	Robin
6	Shipon	"	"	Shipon
7	Abdur Rob	"	"	Abdur Rob
8	Shad	"	"	Shad
9	Rasel	"	"	Rasel
10	Shisin	"	"	Shisin
11	Hriday	"	"	Hriday
12	Shahidul	Foreman	"	Shahidul
13	Hasmat	H	"	Hasmat
14	Mahmud	H	"	Mahmud
15	Eaynus AL	H	"	Eaynus AL

Signature: Course Coordinator (HOD-EHSO / BU OR SEGMENT EHS HEAD)
(EHS/CM/EHSO/FEHSM)

-- Category/Dept. / Staff Role / Name of Sub-contractor / Name of organization of visitor

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Revised
 Ref: IM-72-A1

EHS/Induction Training Attendance Sheet for project sites/Factories

Name of the Project/Factories: **ADB-3** BU/Segment/Cluster: **TL/S/R.**

Being Imparted by: **Anoop At** Date & Location: **01/03/2025**

Topic: **Sampling SOP / NQA / Case Study.**

No.	Name	Designation	Category/Dept.	Signature
1	Md. Abdulla Zaman	Editor	R.P. Sudo	১০/০৩/২৫
2	Md. Faruqul Islam	Editor	RD	১০/০৩/২৫
3	Aslamuddin	-	-	০১/০৩/২৫
4	Habib	-	-	১০/০৩/২৫
5	Souad Mohamed Hossain	-	-	১০/০৩/২৫
6	Md. Razu Rashedul	-	-	১০/০৩/২৫
7	Rabbu	-	-	১০/০৩/২৫
8	Souad Samon Ali	M.OB	-	১০/০৩/২৫
9	Shakib	M.OB	-	১০/০৩/২৫
10	Md. Vang, Hossain	Helper	-	১০/০৩/২৫
11	Md. Sumon	Helper	-	১০/০৩/২৫
12	Md. Rashed Soudo	-	-	১০/০৩/২৫
13	Amin Shukla	Helper	-	১০/০৩/২৫
14				
15				

Signature:  Course Coordinator (HOD-EHSO / BU OR SEGMENT EHS HEAD
 EHSO/MEHSO/FEHSM)

** Category/Dept. - Staff Role/ Name of Sub-contractor/ Name of organization of visitor

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 3-Rev 01
Ref: DM 7.2-A1

EHS Induction Training Attendance Sheet for project sites

Name of the Project/Sector: **ADB-J Project** BU/Segment/Cluster: **T2/E/Bang**
Training reported by: **Amir AT.** Date & Location: **12/5/25, SDA**
Topics: **Emergency SOP, Conduct Rules, etc.**

Sl No.	Name	Designation	Category/Dept.	Signature
1	Liton Islam	Field	RR To	LETON
2	Md. Al Anwar	Engr.	RR To	ALAMIN
3	Mahabub Hossain	Engr.	RR To	MAHABUB
4	Md. Naim Hossain	Engr.	RR To	NASIR
5	Abdul Islam	Engr.	RR To	ABDUL
6	Md. Masud Rana	Engr.	RR To	MASUD
7	MD. PATIM	Engr.	RR To	PATIM
8	ABU HONAIRA	Engr.	RR To	HONAIRA
9	SATUL ISLAM	"	"	SATUL
10	ABUL BAKHAR	"	"	ABUL
11	MAZARUL	"	"	MAZARUL
12	EMRAN	"	"	EMRAN
13	SAKIB SHEIKH	"	"	SAKIB
14	MATHI HASAN	"	"	MATHI
15	EMUL HIRA	"	"	EMUL

Signature:  **CHANDAN CHANDAN**
EHS HEAD

** Category/Dept. - Staff Role/ Name of Sub-contractor/ Name of organization of visitor

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 01
Ref. IN-7.2-A1

EHS/Induction Training Attendance Sheet for project sites/Factories

Name of the Project/Factories: **ADB-3** BU/Segment/Cluster: _____

Training Imparted by: **RTA2/ Anoop M** Date & Location: **24/06/25**

Topic: **Erection SOP**

Sl. No.	Name	Designation	Category/Dept.	Signature
1	Tamim Ahmed	Fitter	Honbeak	[Signature]
2	Farhad Hossen	"	"	[Signature]
3	Sushanto Mistry	"	"	[Signature]
4	Md. Robin Sardar	"	"	[Signature]
5	Hasmat Mrida	"	"	[Signature]
6	Md. Saddam Hossain	"	"	[Signature]
7	Md. Abdur Rob	"	"	[Signature]
8	Md. Tanvir Hossain	"	"	[Signature]
9	Md. Iman Hosen	"	"	[Signature]
10	Md. Uzzal Hossain	"	"	[Signature]
11	Md. Sellim Shekh	"	"	[Signature]
12	Md. Nazmul Hossain	"	"	[Signature]
13	Mohammed Amir H	"	"	[Signature]
14	Md. Babul Islam	"	"	[Signature]
15				

Signature: _____
Course Coordinator / HOD-EHSO / BU OR SEGMENT EHS HEAD
(EHSO/EHSO/ENSM)

** Category/Dept. - Staff Role/ Name of Sub-contractor/ Name of organization of writer

Package 4

Training Participants Report

Office: Nilphamari Office

Date: 07.05.15 Time: From 09:00 To 12:30 PM

Topic of Training / Awareness: ISO 95002

Organized by: Mithun Chakraborty

Topic / Subject covered (in Point)

1. High-Level Structure
2. Leadership & Worker Participation
3. Hazard Identification & Risk Assessment
4. Planning & Operation
5. Performance Evaluation
6. Continual Improvement.

Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
1. Ashok Shaha	SE Supervisor	Ashok	
2. Md Saiful Islam	"	Rezaul	
3. Md Shuhad Khan	"	Sham	
4. Munir Hossain	"	Manir	
5. Shohidul Islam	"	Shohidul	
6. Soumit Hossain	"	Soumit	

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Page | 1

Training Participants Report

1) Venue: SITE

2) Date of Training: 13.05.25 Time from To: 09:30 AM - 11:15 AM

3) Details of Training / Awareness: Working at Height

4) Training by: Mr. Him Gaurin Bandy

5) Topic / Subject covered (in point)

1. Introduction to Working at Height
2. Hazard associated with working at Height
3. PPE & ensuring its use.
4. Equipment inspection before use.
5. Incident reporting
6. Emergency procedures.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
1.	Abu Sayeed	Drawing Master	ABU SAYEED	
2.	Md. Rakon	Line Man	ROKON	
3.	Md. Arafat	"	ARAFAT	
4.	Md. Rony	Drawing Master	RONY	
5.	Md. Rasel	Helper	RASEL	
6.	Md. Tiplu	"	TIPLU	
7.	Mahabub Afam	Line Man	MAHABUB AFAM	
8.	Md. Rabeti	Helper	RABETI	
9.	Sagar Mia	Line Man	SAGAR MIA	
10.	Imran Mia	Helper	IMRAN MIA	

Page 1 of 1

TRANSRAIL		Training Participants Report		
1) Venue:- Site 2) Date of training:- 20/05/25 Time: From To → 2:30 PM - 3:45 PM 3) Details of Training / Awareness:- Lockout / Tagout Procedure 4) Training by:- Mitun Chandra Borth 5) Topic / Subject covered (in Point)				
☒ Introduction to Lockout / Tagout Procedure ☒ Preparation / Notification ☒ Shutdown & Isolation ☒ Stored Energy Release / Verification ☒ Work performance ☒ Restoration / Removal				
Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
1.	Bepol Kumar	Granger/Leader	বিশ্বজিত	
2.	Shahidul Islam	Drawing Master	হান্নুল	
3.	Rakib Masum	Filter	জাফির	
4.	Sabir Masum	Drawing Master	সবুজ	
5.	Gopal Kumar	Filter	গোপাল	
6.	Roman Kumar	"	রমান	
7.	Bifos Kumar	Helper	বিকাশ	
8.	Anontu	"	অনন্ত	
9.	Hafizul Islam	"	হাফিজুল	
10.	Besoy Kumar	"	বিক্রম	

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Page | 4

TNS W&E Transmission Engineering Limited		Training Participants Report		
Site: <u>Sik</u>		Time: From <u>8:40 AM</u> To <u>11:20 AM</u>		
Date of Training: <u>24.05.25</u>		Topic of Training / Awareness: <u>Material Handling</u>		
Training by: <u>Mithun Chakrabarty</u>		Topic / Subject covered (in Point)		
☒ Introduction to Material Handling ☒ Storage & Stacking of Materials ☒ Manual Handling & Equipment Operation ☒ Housekeeping & it's Importance ☒ Incident Reporting.				
No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
1.	Mr. Hasan	Group Leader		
2.	Mr. Rashed	Fitter		
3.	Mr. Akib	"		
4.	Mr. Riyad	"		
5.	Mr. Roni	"		
6.	Mr. Shanto	"		
7.	Mr. Roki	Helper		
8.	Mr. Jakon	"		
9.	Mr. Rayu	"		
10.	Mr. Belal	"		
CONTROLLED				
Page -				

Project name: 400/230KV GIS substation at Mafung (Package-6)
 Training name: Electrical Training.
 Date: 15/06/2025

Time: 8:30 AM

Trainer name:- Mr. Tawar Molla.
 2. Mr. Raza Ahmed.
 3.

Trainee name:-

Sl. No.	Name	Sl. No.	Name
01	Sharif	23	Rakib
02	Bakht	24	Sagar
03	Mamun	25	Sakib
04	Sujoy	26	Rafik
05	Shitab	27	Raitar
06	Mamun	28	Momin
07	Zahir	29	Sazzad
08	Iscander	30	Sakil
09	Sakil	31	Azab
10	Momin	32	Momin
11	Abul	33	Mehak
12	Iscander	34	Rasel
13	Azad	35	Mehedi
14	Mahid	36	Sabbir
15	Abu	37	Rabul
16	Sabbir	38	Fanaka
17	Mahid	39	Ninob
18	Tushar	40	Rosul
19	Mamun	41	Amit
20	Mahid	42	Rabul
21	Mamun	43	Rabul
22	Alam	44	Babul

① Mr. Tawar Molla.
 15.06.25

② Mr. Raza Ahmed
 15.06.25



Dhaka and Western Zone Transmission Grid Expansion Project

Training Name: EHS Induction

Time: 8:15am

Date: 01-06-2025

Trainer Name:

1. Md. Mahide Hasan
2. Md. Zahid Hasan
- 3.

Trainee Name:

S.No	Name	S.No	Name
1	Rahim	24	Robin
2	Atom	25	Maznu
3	Kareem	26	Lokman
4	Shohag	27	Refik
5	Din Islam	28	Sharif
6	Zamal	29	Aziful
7	Atamir	30	Hasan
8	Sharif	31	Ahmed
9	Shavo	32	Latif
10	Sunam	33	Shaujal
11	Eoanab	34	Masud
12	Lalon	35	Ramel
13	Nazmul	36	Ron
14	Razzak	37	Deok
15	Cohel	38	Kajol
16	Humion	39	Ahmed
17	Roton	40	Nagon
18	Kamrul	41	Redoy
19	Perashim	42	Leton
20	Muhammad	43	Shohag
21	Sabono	44	Baton
22	Apon	45	Sajab
23	Kamon	46	Saiful

1. Md. Mahide Hasan
Mahide
01.06.25

2. Md. Zahid Hasan
Zahid
01.06.25



Package 7



Firefighting training

Project Name :230/132/33kv GIS Substation at Rupsha.

Date: 25-June-2025

Learning about fire hazards, preventive measures, and early detection measures is essential.

Personal protective equipment (PPE): Proper use and maintenance of PPE, such as breathing apparatus and protective clothing.

Health and Environmental Considerations: There is a designated area for worker toilets, showers/washrooms, smoking, etc. Site waste should be disposed of in dustbins.

Emergency Response:

It is essential to develop rescue, evacuation and control strategies in the event of a fire. It is mandatory to keep a fire extinguisher nearby when welding. In case of a major fire, contact the nearest fire department (contact number displayed on the site office).



Fig: Firefighting training.



中国电力工程有限公司

China National Engineering Consulting Corp. (CNEC)

Firefighting training sheet

Project Name: 230/132/33kv GIS S-S. Rupsha.

Date: 25 June - 2025

Sl no:	Worker Name	Designation	Signature
01	and. Sajjad	Manam	[Signature]
02	and. Haddus.	Helper	[Signature]
03	noyon	Helper	[Signature]
04	Maher	Helper	[Signature]
05	Khatib	Helper	[Signature]
06	Kat mia	Manam	[Signature]
07	of bidar	Manam	[Signature]
08	Anwarul	Helper	[Signature]
09	Bhik	Helper	[Signature]
10	Mominul	Helper	[Signature]
11	Ufne	Helper	[Signature]
12	Ufne	Manam	[Signature]
13	Borhan	Helper	[Signature]
14	Ufne	Helper	[Signature]
15	Shamir	Helper	[Signature]
16	Mizban	Helper	[Signature]
17	Dabok	Manam	[Signature]
18	Momin	Helper	[Signature]
19	Mohammad	Manam	[Signature]
20	Maim	Helper	[Signature]
21	Dipul	Helper	[Signature]
22	Ufne	Helper	[Signature]
23	Ufne	Helper	[Signature]



中国电力工程有限公司
China National Electric Engineering CO., LTD.

Safety training/attendance Sheet

Project Name: 230/132/33kv GIS Substation, Rupsha

Date: ১৪.০৬.১৫

Sl. No:	Name of Worker:	Signature:	Remarks
1	TUG		
2	KHODEM		
3	NAZMUL		
4	WASIM		
5	MOFIZ		
6	ABDUL		
7	ALAL		
8	MOIN		
9	ROHIM		
10	KORIM		
11	GOPAL		
12	JOBBAR		
13	KUDDUS		
14	TRISTER		
15	JIBARUL		
16	SHAMMIN		
17	HUMAYAN		
18	ROFAT		
19	BOBBAR		
20	NADIM		

Annexure-18: Community Engagement



5/1, Satkhira- Manirampur TL Route



AP 7, Domar-Hatibandha TL



31/2, Domar Hatibandha TL



13/2, Satkhira- Rupsha TL Route



Package 5- Kaliganj Substation

Training Details

https://drive.google.com/file/d/1nY0OJZDjPKQqghlK_A_Nsw1y7frcqDOE/view?usp=sharing

Annexure-19: Photos of Switchyards of Existing Substations

<https://drive.google.com/drive/folders/1gd64IIY603Y3jj0QRSsXLAtnYtoxyNyP?usp=sharing>

Annexure-20: EMP Clause of Packages-7 and 8

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the Initial Environmental Examination ("IEE") or Environmental Management Plan ("EMP") and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached

Design, Supply, Installation, Testing and Commissioning of 220KV to 400 KV Substation at Dhaka and 132KV to 220KV Substation at Comilla, Moulvibazar, Dhanmondi, Shergacha, Jhokkati, Project on Turnkey Basis (Package-5).



Section B: Special Conditions of Contract

Page 5/13

herein as Appendix (2.3); and (ii) any corrective or preventative actions set out in subsequent monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP);
2. Initial Environment Examination (IEE)
3. Environmental Management Plan (EMP);
4. Corrective Action Plan (CAP)

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix (2.3); and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)



Annexure-21: Waste Inventory and Site Clearance from All Solid Waste

Package 2



Waste Inventory and Site Clearance from All Solid Waste Jan-Jun 2025

Note: Please, attach waste inventory for each month from Jan-Jun 2025 with sign and seal. Also please add the plastic empty bags and Piling mud amount in this inventory (Compulsory)

Project Name:				Document No.:			
Month: June 2025				Package:			
Date:				Date:			
No.	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Owner)
I. Non-Hazardous Waste							
A. General Waste							
	I. Hand gloves	Pair	100				
	II. PP rope	Kg	0				
	III. Safety Helmet	No.	10				
	IV. Safety Shoes	Pair	60				
	V. Cement Bag	Kg	10				
	VI. Safety Harness	No.	2				
B. Materials Waste							
	I. Conductor wire	Kg	0				
	II. Steel	Ton	0				



	Oil, Other Metals	Kg	#				
C	Wood Waste	Kg	23				
D	Food Waste	Kg	4				
E	Paper Waste	Kg	4				
F	Packing Materials	Kg	4				
G	Other Non-Hazardous materials	Kg	4				
2. Hazardous Waste							
A	Paints	ltr	4				
B	Lubricants oil	ltr	3				
C	Plastic waste	Kg	4				
D	Concrete bags	No	1700				
E	Printing cartridges	No	11				
F	E-Waste (Desktop, CPU, Printer & Monitor, et c.)	No	4				
G	Medical Waste	Kg	12				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	ltr					
B	Sewage Sludge	ltr					
C	Wastewater	ltr					



Package 3

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
 MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No. - ADB-3-08				
Month: Jan-25			Package: 03		Date: 29/01/2025			
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	1440	0	0	1440	Own
	II.	PP rope	Kg	20	10	0	10	TP
	III.	Safety Helmet	Nos	110	110	0	0	
	IV.	Safety Shoes	Pair	110	0	110	0	
	v.	Carton Box	Kg	60	0	0	60	TP
	vi.	Safety Harness	Nos	70	70	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	50	0	0	50	Own
	II.	Steel	Ton	100	177	0	23	TP
	III.	Other Metals.....	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	10	0	110	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: ADB-3-08			
Month: Jan-25		Package: 03		Date: 29/01/2025			
SL No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	65			65	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	20			20	TP
D	Cement bags	No	1200			1200	TP
E	Printing cartridges	No	2			2	Own
F	E-Waste (Desktop, CPU, Printer & Monitor, etc.)	No	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP



Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
 MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: - ADB-3-09				
Month: Feb-25			Package: 03		Date: -28/02/2025			
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	1020	800	800	220	Own
	II.	PP rope	Kg	100	80	0	20	TP
	III.	Safety Helmet	No.	130	130	0	0	
	IV.	Safety Shoes	Pair	130	0	130	0	
	v.	Cartoon Box	Kg	35	0	0	35	TP
	vi.	Safety Harness	No.	43	43	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	0	0	0	0	
	II.	Steel	Ton	131	33	21	52	TP
	III.	Other Metals.....	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	10	0	110	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: - ADB-3 -09			
Month: Feb-25		Package: 03		Date: -28/02/2025			
SL No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	65			65	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	20			20	TP
D	Concrete bags	Nos	1500			1500	TP
E	Printing cartridges	Nos	5			5	Own
F	E-Waste (Desktop, CPU, Printer & Monitor, etc.)	Nos	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP



Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
 MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: - ADB-3 -10				
Month: March-25			Package: 03		Date: -29/03/2025			
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	820	0	0	820	Own
	II.	PP rope	Kg	10	10	0	0	
	III.	Safety Helmet	No.	100	100	0	0	
	IV.	Safety Shoes	Pair	100	0	100	0	
	v.	Cartoon Box	Kg	80	0	0	80	TP
	vi.	Safety Harness	No.	25	25	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	0	0	0	0	
	II.	Steel	Ton	131	13	18	18	TP
	III.	Other Metals.....	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	10	0	110	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: ADB-3-10			
Month: March-25		Package: 03		Date: -29/03/2025			
SL No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	65			65	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	20			20	TP
D	Concrete bags	Nos	1100			1100	TP
E	Printing cartridges	Nos	1			1	Own
F	E-Waste (Desktop, CPU, Printer & Monitor, etc.)	Nos	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP



Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
 MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: - ADB-3-11				
Month: April-25				Package: 03		Date: -26/04/2025		
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	1020	800	800	220	Own
	II.	PP rope	Kg	100	80	0	20	TP
	III.	Safety Helmet	No	130	130	0	0	
	IV.	Safety Shoes	Pair	130	0	130	0	
	v.	Cartoon Box	Kg	35	0	0	35	TP
	vi.	Safety Harness	No	43	43	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	0	0	0	0	
	II.	Steel	Ton	131	33	21	52	TP
	III.	Other Metals	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	10	0	110	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: ADB-3-11			
Month: April-25		Package: 03		Date: -26/04/2025			
SL No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	65			65	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	40			20	TP
D	General bags	Nos	1130			1130	TP
E	Printing cartridges	Nos	1			1	Own
F	E-Waste (Desktop, CPU, Printer & Monitor, etc.)	Nos	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP



Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADD-3 Project				Document No. - ADD-3 -12				
Month: May-25			Package: 01		Date: -28/05/2024			
Sl No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
I	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	1020	000	000	220	Own
	II.	PP rope	Kg	100	00	0	20	TP
	III.	Safety Harness	Nos	130	130	0	0	
	iv.	Safety Shoes	Pair	130	0	130	0	
	v.	Cartoon Box	Kg	30	0	0	30	TP
	vi.	Safety Harness	Nos	43	43	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	0	0	0	0	
	II.	Steel	Ton	131	31	21	12	TP
	III.	Other Metals	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	10	0	110	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No: ADB-3-12			
Month: May-25		Package: 03		Date: -28/05/2024			
SL No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	65			65	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	20			20	TP
D	Concrete bags	Nos	1200			1200	TP
E	Printing cartridges	Nos	3			3	Own
F	E-Waste (Desktop, CPU, Printer & Monitor, etc.)	Nos	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP



Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
 MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADB-3 Project				Document No. - ADB-3-13				
Month: Jan -25			Package: 03	Date: -12.06.2025				
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	I.	Hand Gloves	Pair	1000	700	700	300	Own
	II.	PP rope	Kg	100	80	0	20	TP
	III.	Safety Helmet	No	130	130	0	0	
	IV.	Safety Shoes	Pair	130	0	130	0	
	v.	Carton Box	Kg	35	0	0	35	TP
	vi.	Safety Harness	No	43	43	0	0	
B	Materials Waste							
	I.	Conductor Box	Kg	0	0	0	0	
	II.	Steel	Ton	131	33	21	62	TP
	III.	Other Metals_____	Kg	0	0	0	0	
C	Wood Waste		Kg	60				
D	Food Waste		Kg	100	0	0	100	Own
E	Paper Waste		Kg	120	30	0	130	own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT

Project Name: 132 KV, 230 KV ADD-3 Project				Document No. - ADD-3 -13			
Month: Jan -25		Package: 03		Date: -12.06.2025			
Sl No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
F	Packing Materials	Kg	60			60	TP
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	20	20	0	0	
B	Lubricants oil	Ltr	0	0	0	0	
C	Plastic waste	Kg	30			30	TP
D	Concrete bags	No.	1200			1200	TP
E	Printing cartridges	No.	1			1	Own
F	E-Waste (Desktop, CPU, Printer & Mouse, etc.)	No.	0				
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr	120	0	0	120	TP
B	Sewage Sludge	Ltr	120	0	0	120	TP
C	Wastewater	Ltr	150	0	0	150	TP

Sensitivity: LNT Construction Internal Use

Package 4

 TRANSRAIL LIGHTING LIMITED MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name: G-475					Form No: Transrail/Consent/HSE/MS/023		
Month: JAN 20					Rev. No: 01		
					Date: 11/01/2019		
Sr. No.	Waste Generation Type	Unit	Generation for the Month (Qty)	Received	Recycled	Disposed	Remarks (Reported by T/Project)
1. Non-Hazardous Waste							
a. General Waste							
	Food/Waste	kg	100			100	
	Plastic Waste	kg	0				
	Tyres/Waste	kg	00	00			
	Oil/Waste	kg	00			0	
	Car/Waste	kg	0				
	Other/Waste	kg	0				
b. Metal Waste							
	Construction Waste	kg	0				
	Iron	kg	0				
	Other Metals	kg	0				
	Wood Waste	kg	00	00			
	Textile Waste	kg	0				
	Paper Waste	kg	0	0			
	Other Construction Waste	kg	0				
	Painting Material (i.e. Colour, Primer, Sealer, etc.)	kg	0				
	Other Non-Hazardous Waste	kg	0				
2. Hazardous Waste							
	Paints/Resins	kg	0				
	Adhesives and Sealants (Epoxy Resin)	kg	0				
	Substrates (Used Oil)	kg	0				
	Waste (Thermal Spent Adhesives)	kg	0				
	Batteries	kg	0				
	Oil/Fuels	kg	00	00			
	Plastic Waste	kg	0				
	Cement Bags	kg	1,000	1,000			
	Used Sealing Adhesives	kg	0				
	Used Paint Tin	kg	0				
	Printing Cartridges	kg	00	00			
	Used absorbents (Oil spill, Oil spill)	kg	0				
	Flammable (LPG, Propane, Butane, etc.)	kg	0				
	Medical waste	kg	0				
3. Sewage Waste & Waste water							
	Trapped Sewage/Waste Water	kg					
	Sewage Sludge	kg					
	Waste Water (Cooling Water)	kg					

Note: 1. This data should be checked on or before 15th of every month at HQ - HSE Dept. (If not applicable, then mark NA)
 2. Data to be maintained by Plant/Project store person with the help of JSP/ respective HSE & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd.
 Khushbu Kumar Singh
 LK HSE Engineer

TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name: Q-479		Form No.: TRANSRAIL/COMPLA/MSW/001					
Month: FEB-25		Rev. No: 01					
		Date: 11.02.2018					
Sl. No.	Waste Generation Type	Unit	Generation for the Month (kg)	Reused	Recycled	Disposed	Remarks (Checked by T/Person)
1. Non-Hazardous Waste							
A. General Waste							
1	Hand Gloves	Pair	100			100	
2	WIP Rags	Kg	0				
3	Safety Helmet	No.	00			00	
4	Safety Shoes	Pair	00			0	
5	Carpet Swabs	Kg	0				
6	Safety Harness	No.	0				
B. Metal Waste							
1	Conductor Bar	Kg	0				
2	Steel	Ton	0				
3	Other Metals	Kg	0				
4	Wood Waste	Kg	0				
5	Food Waste	Kg	0				
6	Paper Waste	Kg	0	0			
7	Mixed Construction Waste	Kg	0				
8	Packing Material (Ld - Conductor Drum/Insulator/Other)	Kg	00	00			
9	Other Non-Hazardous Waste	Kg	0				
2. Hazardous Waste							
1	Paints Residual	Kg	0				
2	Adhesives and Sealants (Silicon Seal)	Ltr.	0				
3	Lubricants (Used Oil)	Ltr.	0				
4	Solvents (Thinner, Spirit, Acetone)	Ltr.	0				
5	Batteries	No.	0				
6	Oil Filter	Kg	10	10			
7	Plastic Waste	Kg	0				
8	Cement Bags	No.	1,000	1,000			
9	Used Blasting Adhesive	kg	0				
10	Used Paint Tin	Kg	0				
11	Printing Cartridge	No.	10	10			
12	Used absorbents (City naps City cotton)	Kg	0				
13	E-Waste (Desktop, CPU, Printer, Mouse, Cables, Fluorescent Brite etc.)	Kg	0				
14	Medical waste	Kg	0				
3. Sewage Waste & Waste water							
1	Treated Sewage Waste Water	Ltr.					
2	Sewage Sludge	Ltr.					
3	Waste Water (Cool Project)	Ltr.					

Note: 1. This data should be reached in or before 10th of every month at HQ - HSE Dept. (if not applicable, then mark Nil)

2. Data to be maintained by Plant/Project store person with the help of safety/ respective HSE & monitoring by Project/Plant HSE Person.

For Transrail Lightening Ltd

Kishore Kumar Sr.
DG, HSE, Lightening Ltd

TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
		MONTHLY WASTE GENERATION REPORT - PROJECT					
Project Name: G-475				Form No.: Transrail/CL/MS/0000000001			
Month: MAR-20				Rev. No: 01 Date: 13.03.2019			
Sr. No.	Waste Generation Type	Unit	Generation for the Month(Dry)	Reused	Recycled	Disposed	Remarks (Disposed by whom)
1. Non-Hazardous Waste							
A. General Waste							
	Hand Gloves	Pair	200			200	
	TV Paper	Kg	0				
	Galaxy Notebook	Pair	100			30	
	Galaxy Phones	Pair	30			4	
	Garbage Bags	Kg	0				
	Galaxy Handset	Box	0				
B. Metal Waste							
	Conductor Spig	Kg	0				
	Steel	Ton	0				
	Other Metals	Kg	0				
	Wood Waste	Kg	0				
	Food Waste	Kg	0				
	Paper Waste	Kg	0	0			
	Steel Construction Waste	Kg	0				
	Packing Material (Like Conductor Drum/Insulator/Other)	Kg	30	30			
	Other Non-Hazardous Waste	Kg	0				
2. Hazardous Waste							
	Paint Residue	Kg	0				
	Adhesives and Sealants (Glue Gel)	Ltr	0				
	Lubricants (Used Oil)	Ltr	0				
	Solvents (Thinners, Spirit, Acetone)	Ltr	0				
	Batteries	Box	0				
	Oil Filters	Kg	10	10			
	Plastic Waste	Kg	0				
	Cement Bags	Box	2,000	1,500			
	Used Blasting Explosive	Box	0				
	Used Paint Tins	Kg	0				
	Printing Cartridges	Box	10	10			
	Used elements (Dry type Dry cell)	Kg	0				
	3-phase (Switch, CPU) Power, Mouse, Cables, Fluorescent Ballasts etc.	Kg	0				
	Medical waste	Kg	0				
3. Sewage Waste & Waste water							
	Treated Sewage Waste Water	Ltr					
	Sewage Sludge	Ltr					
	Raw Sewer (Civil Project)	Ltr					

Notes: 1. This data should be reached on or before 10th of every month at HQ - ESE Dept. (If not applicable, then mark Nil)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective HOD & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd
 Khwaja Nurul Mulk
 DGS HSE Engineer

TRANSRAIL		TRANSRail LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name: G-478		Form No.: Transrail/Light/MSW/023				Rev. No.: 01	
Month: APRIL-25		Date: 13.04.2019					
No. No.	Waste Generation Type	Unit	Generation for the Month(Day)	Reused	Recycled	Disposed	Remarks (Disposed by T/Person)
1. Non-Hazardous Waste							
A. General Waste							
i	Hand Drives	Pairs	100			100	
ii	PP Ropes	Kg	0				
iii	Safety Harness	No.	00	00			
iv	Safety Shoes	Pairs	00			0	
v	Carbon Soles	Kg	0				
vi	Safety Harness	No.	0				
B. Metal Waste							
i	Construction Site	Kg	0				
ii	Steel	Tons	0				
iii	Other Metals	Kg	0				
i	Wood Waste	Kg	0				
ii	Food Waste	Kg	0				
iii	Paper Waste	Kg	0	0			
iv	Wood Construction Waste	Kg	0				
v	Painting Material Like (Conductor Drums/rollers/Other)	Kg	000	000			
vi	Other Non-Hazardous Waste	Kg	0				
2. Hazardous Waste							
i	Paints Residue	Kg	0				
ii	Adhesives and Sealants (Epoxy Grout)	Ltr	0				
iii	Lubricants (Used Oil)	Ltr	0				
iv	Solvents (Thinner, Spirit, Acetone)	Ltr	0				
v	Batteries	No.	0				
vi	Oil Filters	Kg	10	10			
vii	Plastic Waste	Kg	0				
viii	Canvas Bags	No.	2,000	1,000			
ix	Used Shoring Adhesive	No.	0				
x	Used Paint Tins	Kg	0				
xi	Printing Cartridges	No.	10	10			
xii	Used absorbents (Oil rag/ Oil cloth)	Kg	0				
xiii	Waste (Desktop, CPU, Printer, Mouse, Cable, Fluorescent Ball etc.)	Kg	0				
xiv	Medical waste	Kg	0				
3. Sewage Water & Waste water							
i	Treated Sewage Waste Water	Ltr					
ii	Sewage Sludge	Ltr					
iii	Waste Water (Cool Project)	Ltr					

Note: 1. This data should be reached on or before 15th of every month at HQ - HSE Dept. (If not applicable, then mark N/A)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective HOD & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd
 Khairul Karim M. Sc. B.Sc.
 DG- HSE


TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name: G-475		Form No.: TRANSRAIL/FORM/001					
Month: MAY-25		Rev. No: 01 Date: 15.05.2018					
Sr. No.	Waste Generation Type	Unit	Generation for the Month (Qty.)	Reused	Recycled	Disposed	Remarks (Dispose by T/Plant)
1. Non-Hazardous Waste							
a. General Waste							
1	Food (Solid)	Kg	100			100	
2	Oil Spillage	Kg	0				
3	Spent Material	Kg	50	50			
4	Safety Glasses	Pair	50			50	
5	Carbon Socks	Kg	0				
6	Safety Harness	Nos.	0				
b. Metal Waste							
1	Conductor Bils.	Kg	0				
2	Steel	TON	0				
3	Other Metals " "	Kg	0				
4	Wood Waste	Kg	0				
5	Plastic Waste	Kg	0				
6	Paper Waste	Kg	10	10			
7	Wood Construction Waste	Kg	0				
8	Packing Material (Box, Container, Drum, Insulation, Other)	Kg	50	50			
9	Other Non-Hazardous Waste " "	Kg	0				
2. Hazardous Waste							
1	Spent Residue	Kg	0				
2	Adhesives and Sealants (Silicon Seal)	Ltr	0				
3	Lubricants, Grease (Oil)	Ltr	0				
4	Solvents (Tinner, Paint, Antifreeze)	Ltr	0				
5	Batteries	Nos.	0				
6	Oil Filters	Kg	10	10			
7	Plastic Waste	Kg	0				
8	Cement Bags	Nos.	5,000	5,000			
9	Used Blasting, Adhesive " "	kg	0				
10	Used Paint Tins	Kg	0				
11	Painting Cartridges	Nos.	10	10			
12	Used absorbent (Oil spillage, Oil spill)	Kg	0				
13	Waste (Coating, (PVC) Pipes, Mould, Cables, Fluorescent Bils, etc.)	Kg	0				
14	Medical waste	Kg	0				
3. Sewage Waste & Waste water							
1	Treated Sewage Water (Wast)	Ltr					
2	Sewage Sludge	Ltr					
3	Waste Water (Civil Project)	Ltr					

Note: 1. This data should be reached on or before 7th of every month at HQ - HSE Dept. (If not available, then mark NA)

2. Data to be maintained by Plant/Project store person with the help of safety/ respective HOD & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd
 Kishore Kumar Bhattacharya
 DG, HSE Engineer

Project Name:					Document No: -			
Month: June 2025			Package: 05		Date: - 02.07.2025			
Sl. No	Waste Generation Type		Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste							
A	General Waste							
	i.	Hand Gloves	Pair	6			6	TP
	ii.	PP rope	Kg	8			8	TP
	iii.	Safety Helmet	Nos	5			5	TP
	iv.	Safety Shoes	Pair	2			2	TP
	v.	Cartoon Box	Kg	10			10	TP
	vi.	Safety Harness	Nos	0			0	
B	Materials Waste							
	I.	Conductor Bits	Kg	0			0	
	II.	Steel	Ton	0				
	III.	Other Metals.....	Kg	0				
C	Wood Waste		Kg	0				
D	Food Waste		Kg	500				TP
E	Paper Waste		Kg	0				
F	Packing Materials		Kg	0				

F	Packing Materials	Kg	0					
G	Other Non-Hazardous materials	Kg	0					
2. Hazardous Waste								
A	Paints	Ltr	0					
B	Lubricants oil	Ltr	0					
C	Plastic waste	Kg	0					
D	Cement bags	Nos	35000			35000	TP	
E	Printing cartridges	Nos	0					
F	E-Waste (Desktop,CPU,Printer&Mouse,etc.)	Nos	0					
G	Medical Waste	Kg	0					
3. Sewage Waste &Wastewater								
A	Treated sewage wastewater	Ltr	0					
B	Sewage Sludge	Ltr	0					
C	Wastewater	Ltr	0					

Package 6

Project Name:					Document No: -				
Month: June 2025			Package: 06		Date: -				
Sl · No	Waste Generation Type		Un it		Generati on for the month	Reus ed	Recycl ed	Dispos ed	Remar ks (dispos ed by TP/Own n)
1	Non-Hazardous Waste								
A	General Waste								
	i.	Hand Gloves	Pair	8			8	TP	
	ii.	PP rope	Kg	4			4	TP	
	iii.	Safety Helmet	Nos	3			3	TP	
	iv.	Safety Shoes	Pair	3			3	TP	
	v.	Cartoon Box	Kg	15			15	TP	
	vi.	Safety Harness	Nos	0			0		
B	Materials Waste								
	I.	Conductor Bits	Kg	0			0		
	II.	Steel	Ton	0			0		
	III.	Other Metals.....	Kg	0			0		
C	Wood Waste		Kg	0			0		
D	Food Waste		Kg	700			700	TP	
E	Paper Waste		Kg	0			0		
F	Packing Materials		Kg	0			0		
G	Other Non-Hazardous materials		Kg	0			0		
2. Hazardous Waste									

2. Hazardous Waste								
A	Paints	Ltr	0			0		
B	Lubricants oil	Ltr	0			0		
C	Plastic waste	Kg	0			0		
D	Cement bags	Nos	38000			38000	TP	
E	Printing cartridges	Nos	0			0		
F	E-Waste (Desktop,CPU,Printer&Mouse,etc.)	Nos	0			0		
G	Medical Waste	Kg	0			0		
3. Sewage Waste &Wastewater								
A	Treated sewage wastewater	Ltr	0			0		
B	Sewage Sludge	Ltr	0			0		
C	Wastewater	Ltr	0			0		



Annexure-22: Safety Signs at Site



Package 2



Package 3





Package 4



Package 5



Package 6

Annexure-23: Status of CAP

Grievence Box at Sites



Rupsha Substation (Package 7)



Satkhira Rupsha TL (Package 3)



Manirampur Substation (Package 7)



Phultola Substation (Package 7)



Package 6

Secondary Container at construction site



21/5 TL, Bagerhat-Pirojpur-Bhandaria, Package 4



Domar-Hatibandha (Package 4)



4/1 TL, SMTL Package 3

Annexure-24: Pre-Work Briefing



Rampura Bashundhara Under ground cable line (Package 2)



Kaliganj- Maheshpur (Package 3)



SMTL (Package 3)



Domar Hatibandha (Store) (Package 4)



Gopalganj Shibchar TL (Package 3)



Package 5



Package 6



Package 7

Annexure- 25: Clearance from BIWTA for River Crossing

https://drive.google.com/drive/folders/10RVE4woW-0QahmNMEURNXIaSFYPt04wy?usp=drive_link

Annexure- 26: Crops Rate from Agricultural Office

https://drive.google.com/drive/folders/1V49CNRxW2XRu_XbxRuHtYvFPSMUOiuwT?usp=drive_link

Annexure- 27: Health and safety Checklist

Safety Checklist for Package 2



Environment, Health, and Safety (EHS) Checklist

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]

Contractor: TBEA

Project Activity: Underground electric cable transmission line installation

Date: 28 May 2025

Site Location: Bashundhara to Afabnagar (Project Site)

Checked by: Mr. Topu Hawlader

Designation: EHS Supervisor

Detailed Checklist Table

Section & Items	Yes	No	N/A	Remarks
1 General Site Safety				
Site fencing and restricted entry controls in place?	✓			Fencing and barriers properly maintained
Warning signs posted at all work areas?	✓			High voltage and excavation warning boards clearly visible
Emergency assembly points marked and communicated?	✓			Marked near main site entrance
First aid kits adequately stocked and accessible?	✓			Regularly inspected and up to date
Availability of emergency contact numbers on site?	✓			Displayed on notice boards
Workers trained on emergency response and evacuation?	✓			Training conducted in May 2025
Fire extinguishers present and inspected?	✓			Inspected weekly, service tag up to date
2 Excavation and Underground Work				
Underground utility survey completed before digging?	✓			Survey map reviewed and marked
Excavation permits obtained and displayed?	✓			All valid and site records maintained
Shoring, shielding, or trench boxes used as required?	✓			Trench boxes used for deep sections
Excavated soil stored safely away from trench edges?	✓			Maintained minimum 1 m distance from edges
Access ladders or safe means of egress provided?	✓			Fixed ladders available every 7 m
Atmospheric monitoring for hazardous gases conducted?	✓			Checked daily, no gas detected



Section & Items	Yes	No	N/A	Remarks
Barricading and reflective markers in place around excavations?	✓			Adequate night reflectors and barricades used
3 Electrical Safety				
Workers trained on electrical hazards?	✓			Toolbox talk conducted weekly
Lockout/tagout (LOTO) procedures implemented?	✓			All power sources tagged properly
Proper grounding of cables and equipment?	✓			Verified by electrical supervisor
Use of insulated tools and PPE?	✓			Used during connection and termination works
Temporary electrical panels properly maintained?	✓			Checked by site electrician
Warning signs and danger boards installed?	✓			Posted at all entry points and panels
4 Personal Protective Equipment (PPE)				
Hard hats, safety boots, gloves, reflective vests used?	✓			All workers equipped
Eye and face protection provided for cutting or grinding?	✓			Safety goggles and face shields used
Hearing protection available for noisy activities?	✓			Earplugs distributed as required
Respiratory protection used for dusty work?	✓			Masks provided for all dust-producing activities
Regular inspection and replacement of PPE?	✓			Stock maintained and records available
5 Environmental Management				
Erosion and sediment control measures in place?	✓			Geo-textile sheets and sand bags used
Spill prevention and response plan implemented?	✓			Spill kit available on site
Proper waste segregation and disposal?	✓			Labeled bins placed at multiple points
Dust suppression measures (e.g., water spraying)?	✓			Water spray done twice daily
Noise levels monitored and mitigated?	✓			Work restricted during night
Hazardous materials stored and labeled properly?	✓			Chemical store well labeled and locked
Tree or vegetation protection as per plan?	✓			Trees covered with protective fencing
6 Traffic and Public Safety				



Section & Items	Yes	No	N/A	Remarks
Traffic management plan approved and implemented?	✓			Approved by local authority
Trained flagmen deployed at crossings and entry points?	✓			Active throughout working hours
Adequate lighting and signage for night work?	✓			Temporary lights and reflective signboards installed
Pedestrian pathways clearly marked and protected?	✓			Separate temporary walkway maintained
Vehicle inspection and maintenance records available?	✓			Pre-start checklists maintained by transport team
7 Health and Welfare				
Drinking water and sanitation facilities available?	✓			Sufficient supply and clean toilets
Rest shelters provided for workers?	✓			Designated break areas under shade
Regular health check-ups conducted?	✓			Last check-up: May 15, 2025
COVID-19 or infectious disease prevention measures followed?	✓			Sanitizer and temperature checks at entry
Mosquito and vector control measures implemented?	✓			Periodic spraying carried out
8 Documentation & Monitoring				
Daily EHS toolbox talks conducted and recorded?	✓			Records available in site office
Incident and near-miss reporting system in place?	✓			Zero incidents reported this month
Environmental and safety inspection logs maintained?	✓			Updated weekly
Corrective action plans followed up?	✓			All issues closed as per last audit
Records of waste disposal and consents maintained?	✓			All disposal receipts filed



Safety Checklist for Erection Work at Package 3

ENVIRONMENTAL
POWER TRANSMISSION & DISTRIBUTION

END CHECKLIST FOR ERECTION

Name of Site: SRT4 Location No: 376 Date: 13/04/2025

SL NO	DESCRIPTION	OBSERVATION		REMARKS
		YES	NO	
1	Whether tower erection is completed (টاور নির্মাণ সম্পূর্ণ হয়েছে কিনা)	Yes		
2	Is first aid kit available on site? (স্থান সংশ্লিষ্ট প্রথম চিকিৎসা সেট উপলব্ধ কিনা)	Yes		
3	Whether proper lock thing is done and safe clearance is maintained from permanent structures, HT/LT lines, (নিরাপত্তা বরফ দিচ্ছে) সম্পূর্ণ হয়েছে কিনা এবং সঠিক করে আছে। HT/LT লাইন থেকে নিরাপত্তা বরফ রাখা হয়েছে কিনা)	Yes		
4	A guard with a red flag and whistle is deployed around the tower to avoid unauthorized access to the work area. One person should be engaged for height work monitoring. (সাইটের আশেপাশে সতর্কতা প্রদানের জন্য লাল পতাকা এবং বাজের সাহায্যে গার্ড রাখা হয়েছে কিনা এবং একজন লোকের সাথে হাইটের কাজের মনিটরিং করা হয়েছে কিনা)	Yes		
5	Whether proper communication system is established and communicated to the workers. (সঠিক যোগাযোগ ব্যবস্থা প্রতিষ্ঠিত হয়েছে কি না এবং কর্মীদের মাধ্যমে প্রেরণ করা হয়েছে)	Yes		
6	Whether life lines are provided in all four leg of tower and tied with shod of ladders. (সাইট টাওয়ারের পাঁচটি লাইফ লাইন প্রদান করা হয়েছে কিনা)	Yes		
7	Whether the tower has a height pass for working at height. (টওয়ারে কাজ করার জন্য হাইট পাস প্রদান করা হয়েছে কিনা)	Yes		
8	Whether the ladders have a rope grab type fall arrester and use a vertical life line attached to the feet when climbing and descending from tower. (নিরাপত্তা বরফ এবং লাইফ লাইন ব্যবহার করা হয়েছে কিনা এবং টাওয়ারের উপর দিয়ে লাইফ লাইন প্রদান করা হয়েছে কিনা)	Yes		
9	Horizontal lifelines are provided with horizontal loading. (নিরাপত্তা বরফ লাইফলাইন অনুভূমিক প্রদান করা হয়েছে কিনা)	Yes		
10	Whether all main leg joints are properly tightened. (সাইট প্রধান পাঁচটি লাইফলাইন সঠিকভাবে শক্ত করা হয়েছে কিনা)	Yes		
11	Whether all necessary plan bracing, top bracing, diagonals etc. are lifted and fitted section was before move to next section erection. (সাইট প্রয়োজনীয় ব্র্যাকিং, টপ ব্র্যাকিং, ডায়াগোনাল ইত্যাদি উঠানো এবং ফিট করা হয়েছে কিনা)	Yes		
12	Whether all turning bars and spacers have taglines. And, nutbolts and washers are checked in the tool bag. (সাইট টার্নিং বার এবং স্পেসারসে ট্যাগলাইন আছে কিনা এবং নুটবল্ট এবং ওয়াশারস চেক করা হয়েছে কিনা)	Yes		
13	Whether any TMT formwork bars are available at the location. (সাইটে TMT ফর্মওয়ার্ক বার উপলব্ধ কিনা)	Yes		
14	Whether suitable tools and machines, ropes are being used and checked before working work. (সাইটের উপর উপযুক্ত সরঞ্জাম এবং মেশিন, রোপ ব্যবহার করা হচ্ছে কিনা এবং কাজের আগে চেক করা হয়েছে কিনা)	Yes		
15	Whether PP rope is used for lifting material. (সাইট পলিপ্রোপাইলিন রোপ ব্যবহার করা হচ্ছে কিনা)		No	
16	Come Along Clamps/Mechanical clamping arrangements are used to hold the load until the tower section is installed at height. (সাইটের উপর কাম অলংগ ক্লাম্প/মেকানিক্যাল ক্লাম্পিং ব্যবস্থা ব্যবহার করা হয়েছে কিনা)	Yes		
17	Single wire rope protected against sharp edges. (সাইটের উপর সারিং রোপ সুরক্ষিত করা হয়েছে কিনা)	Yes		
18	All anchorage points are secured and properly reinforced. (সাইটের উপর সব বন্ধন বিন্দু সুরক্ষিত এবং সঠিকভাবে শক্ত করা হয়েছে কিনা)	Yes		
19	Are 4 man guy sling support provided for guy pole. (সাইটের উপর 4 জন গাই স্লিং সাপোর্ট প্রদান করা হয়েছে কিনা)	Yes		
20	Whether HT nut & bolt are in use for guy pole joints. (সাইটের উপর HT নুট ও বোল্ট গাই পোল জয়েন্টের জন্য ব্যবহার করা হয়েছে কিনা)	Yes		
21	Are only single sheave pulley or Come type is used in height or not. (সাইটের উপর এক শেভ পুলি বা কাম টাইপের পুলি ব্যবহার করা হয়েছে কিনা)	Yes		
22	Whether all TSPs have third party TC and have identification number or color coding. (সাইটের TSP-এ তৃতীয় পক্ষের TC আছে কিনা এবং চিহ্নিতকরণ নম্বর বা রঙ কোডিং আছে কিনা)	Yes		
23	Whether drinking water is available at workplace. (সাইটের উপর পানীয় জল সরবরাহ করা হয়েছে কিনা)	Yes		

Signature of Site Supervisor/Officer: 

Signature of EHS/ES&S Supervisor:

**LAT CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION**

Name of Site: **SMTL** EHS CHECKLIST FOR ERECTION Location No.: **35/7** Date: **07/05/25**

Sl NO	DESCRIPTION	OBSERVATION		REMARKS
		YES	NO	
1	Whether tower footing is completed (টওয়ার ফুটিং সম্পূর্ণ হয়েছে কিনা।)	Yes		
2	Is first and last available on site (প্রথম ও শেষের টাওয়ার/পোস্ট পাওয়া গেছে কিনা।)	Yes		
3	Whether proper back filling is done and safe clearance is maintained from permanent structures, HT/LT lines (সঠিক ব্যাক ফিলিং সম্পূর্ণ হয়েছে কিনা এবং স্থায়ী কাঠামো, HT/LT লাইন থেকে নিরাপদ দূরত্ব বজায় রাখা হয়েছে কিনা।)	Yes		
4	A guard with a red flag and whistle is deployed around the tower to avoid unauthorized access to the work area. one person should be engaged for height work monitoring (কাজের ক্ষেত্রে সীমিত অঞ্চল ঘেঁষা থেকে নিষেধ করা হবে এবং একজন ব্যক্তি হাইট কাজের মনিটরিংয়ের জন্য নিয়োজিত থাকবে।)	Yes		
5	Whether proper communication system is established and communicated to the workers (সঠিক যোগাযোগ ব্যবস্থা স্থাপন করা হয়েছে কি না এবং কর্মীদের জানিয়ে দেওয়া হয়েছে।)	Yes		
6	Whether life lines are provided in all four top of tower and tied with web of towers (টওয়ারের চারটি উপরে লাইফ লাইন দেওয়া হয়েছে কিনা।)	Yes		
7	Whether the filer has a height pass for working at height (টওয়ারের ফাইলারের হাইট পাস আছে কিনা।)	Yes		
8	Whether the filer have a rope grab type fall arrester and use a vertical life line attached to the feet when climbing and descending from tower (ফাইলারের হাটুতে রোপ গ্রাব টাইপ ফল অরেস্টার এবং টাওয়ারের উপর দিয়ে লাইফ লাইন লাগিয়ে উঠতে নামতে হবে।)	Yes		
9	Horizontal lifelines are provided with horizontal bracing (সরুপাশের লাইফলাইন অনুভূমিক ব্র্যাকিং দিয়ে গঠন করা হবে।)	Yes		
10	Whether all main leg joints are properly tightened (টওয়ারের প্রধান লেগের জয়েন্টস সঠিকভাবে শক্ত করা হয়েছে কিনা।)	Yes		
11	Whether all necessary plan bracing, hip bracing, diagonal etc. are fitted and tight section wise before move to next section erection (সকল প্রয়োজনীয় প্লান ব্র্যাকিং, হিপ ব্র্যাকিং, ডায়াগনাল ইত্যাদি ফিট করা হয়েছে এবং সেকশন সেকশন ভিত্তিতে টাইট করা হয়েছে কিনা।)	Yes		
12	Whether all turning bars and spacers have taglines, and nutlocks and washers are cleaned in the tool bag (সকল টার্নিং বার এবং স্পেসার ট্যাগলাইন, নটলক এবং ওয়াশারস টুল ব্যাগে পরিষ্কার করা হয়েছে কিনা।)	Yes		
13	Whether any TMT turning bars are available at the location (কোনো TMT টার্নিং বার সেখানে পাওয়া গেছে কিনা।)	Yes		
14	Whether suitable tools and machines, ropes are being used and checked before starting work (উপযুক্ত সরঞ্জাম এবং মেশিন, রোপস ব্যবহার করা হচ্ছে কিনা এবং কাজ শুরু করার আগে পরীক্ষা করা হয়েছে কিনা।)	Yes		
15	Whether PP rope is used for lifting material (সিঁদুরের রোপ দিয়ে উপকরণ তুলানো হচ্ছে কিনা।)		No	
16	Come Along Clamp/Mechanical clamps/any alternative arrangements are used to hold the load until the tower section is installed at height (টওয়ারের সেকশন স্থাপনের আগে লোড ধরে রাখার জন্য কাম অলংগ ক্লাম্প/মেকানিক্যাল ক্লাম্প/কোনো বিকল্প ব্যবস্থা ব্যবহার করা হবে।)	Yes		
17	Single wire rope protected against sharp edges (সিংল ওয়িয়ার রোপের তীক্ষ্ণ প্রান্ত থেকে সুরক্ষিত করা হবে।)	Yes		
18	All anchorage points are secured and properly reinforced (সকল আঁকড়ানোর বিন্দু নিশ্চিত এবং সঠিকভাবে শক্তিশালী করা হয়েছে কিনা।)	Yes		
19	Are 4 nos guy wire support provided for guy pole (টওয়ার/টিল্টারের গুই পোল বা পাইল এর জন্য ৪ নং গুই ওয়িয়ার দেওয়া হয়েছে কিনা।)	Yes		
20	Whether HT nut & bolt are in use for guy pole joints (টওয়ার/টিল্টারের গুই পোল জয়েন্টের জন্য HT নট ও বোল্ট ব্যবহার করা হয়েছে কিনা।)	Yes		
21	Are only single sheave pulley of Close type is used in height or not (উচ্চতায় কেবল একশেভ পুলিই ব্যবহার করা হয়েছে কিনা।)	Yes		
22	Whether all T&Ps have third party TC and have identification number or color coding (সকল T&P-এ তৃতীয় পক্ষের TC আছে কিনা এবং চিহ্নিতকরণ নম্বর এবং রঙ কোডিং আছে কিনা।)	Yes		
23	Whether drinking water is available at workplace (কাজের ক্ষেত্রে পানীয় জল সরবরাহ আছে কিনা।)	Yes		

Signature of Licensed Engineer/Officer: *[Signature]*

Signature of EHS/HSR Supervisor: *[Signature]*

[illegible]

C5 CamScanner

Name of Project: ADB-3		MRT Construction P140, PL 02		Date: 09.05.25		
Sl. No.	Name of Task	Area to be Inspected Physically	Qty Inspected	Qty Accepted	Qty Rejected	NO & Reason of Non-operation Details if found void
1	CONCRETE	1. Rightness alignment of the pile 2. All bolts are tight & not missing 3. All bolts are secure 4. Column coating, red-green for visible and accessible 5. No work in dry working area of bearings of pile joint	OK YES YES YES NO	01 NO		
2	PILE JOINT	1. Condition of front corner & joint 2. Check for loose joint 3. Column coating, red-green for visible and accessible 4. Check for & loose joint 5. Condition of side joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
3	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
4	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
5	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
6	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
7	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
8	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
9	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
10	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
11	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
12	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
13	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
14	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
15	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
16	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
17	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
18	PILE JOINT	1. Check for loose joint 2. Check for loose joint 3. Check for loose joint 4. Check for loose joint 5. Check for loose joint 6. Check for loose joint 7. Check for loose joint 8. Check for loose joint	OK YES YES YES YES YES YES	10 NO		
Name of Team members nominated for RTI inspection:						
1	RTI Director	Name: perabo DRC	Signature: [Signature]	Date: 08.05.25		
2	Team Supervisor	Name: [Name]	Signature: [Signature]	Date: [Date]		
3	Site Engineer	Name: [Name]	Signature: [Signature]	Date: [Date]		
4	Inspector	Name: [Name]	Signature: [Signature]	Date: [Date]		

Pile Foundation Checklist Package 3

L&T Construction Pile, TL, BU			
Name of Project: ADB PMG-3		Date of Inspection: 03/01/2025	
Location/Station: 34/1, Skm			
Sl. No.	Points to be checked	Status (Yes/No)	Corrective Action Status if No
3. Tripod (Before Piling & during Rig installation)			
3.1	Are the tripod legs are fastened properly? (ত্রিভুজের পায়ে কি নিশ্চিতভাবে বন্ধ করা হয়েছে?)	yes	
3.2	Are all the bolts of fanga joint fitted properly and tightened, with no slack joints? (ফ্যাংগ জয়েন্টের বোল্ডগুলো কি নিশ্চিতভাবে বন্ধ করা হয়েছে এবং শিয়ার বোল্ডের উপস্থিতি নিশ্চিত করা হয়েছে?)	yes	
3.3	Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাংগার পিন/বোল্ডের অবস্থা কি ভাল আছে এবং কোনো ক্ষতি বা ত্রুটি নেই কি?)	yes	
3.4	Is the wire rope used for hoisting of TMC pipe, frame pipe found free from all defects like lost coils, broken wires, etc. and TMC pipes, frame pipes (hoisting) found ok and ready to use? (TMC পাইপ, ফ্রেম পাইপের জন্য ব্যবহৃত তারের তার কি ভাল আছে এবং তারের তারের ক্ষতি বা ত্রুটি নেই কি?)	yes	
3.5	Is the hook latch installed on hook used for hanging the load? (লোড হ্যাংগারের হুক ল্যাচ কি স্থাপন করা হয়েছে?)	yes	
3.6	Are minimum of 4 no. of clamps installed for spring of wire rope? (তারের তারের স্প্রিংয়ের জন্য কমপক্ষে 4 টি ক্ল্যাম্প স্থাপন করা হয়েছে কি?)	yes	
3.7	Are the gap between all 4 clamps are equal? (তারের 4 ক্ল্যাম্পের মধ্যে গ্যাপ কি সমান?)	yes	
3.8	Are the both portion of 4 clamps is towards free end of wire rope? (তারের 4 ক্ল্যাম্পের দুইটি অংশ কি মুক্ত প্রান্তের দিকে মুখ করা হয়েছে?)	yes	
3. Winch Machine (During Pile operation)			
3.1	Are all rotating parts guarded? (সকল ঘূর্ণনশীল অংশ কি সুরক্ষিত?)	yes	
3.2	Are 3 no. of belts in use? (3 টি বেল্ট কি ব্যবহার করা হচ্ছে?)	yes	
3.3	Is pulley rope available? (পুলি রোপ উপলব্ধ কি?)	yes	
3.4	Is condition of pulley & shaft found ok? (পুলি ও শ্যাফটের অবস্থা কি ভাল আছে?)	yes	
3.5	Is condition of lower drum & drum shaft found ok? (লোয়ার ড্রাম ও ড্রাম শ্যাফটের অবস্থা কি ভাল আছে?)	yes	
3. Welding machine			
3.1	Is welding machine mounted by motor mount (একটি মোটর মাধ্যমে স্থাপন করা হয়েছে কি?)	yes	
3.2	Is safety earth available for welding machine (একটি সুরক্ষার জন্য মাটি উপলব্ধ কি?)	yes	
3.3	Is welding cable with earth clamp used for return path (সিউইচিং ক্যাবল মাটি ক্ল্যাম্পের মাধ্যমে ফেরত পথের জন্য ব্যবহার করা হয়েছে কি?)	yes	
3.4	Is the welding cable is free from any defect, joint & damage (একটি ক্যাবল কি কোনো ত্রুটি, জয়েন্ট বা ক্ষতি থেকে মুক্ত?)	yes	
3.5	Is welder having leather apron, leather gloves, & welder face shield? (ওয়ার্ডার কি লিথার এপ্রন, লিথার গ্লোভস এবং ওয়ার্ডার ফেস শিল্ড ব্যবহার করছেন?)	yes	
4. Diesel generator			
4.1	Is safety earth of oil available? (ওয়েল্ডিং মেশিনের জন্য সুরক্ষার জন্য মাটি উপলব্ধ কি?)	yes	
4.2	Is the oil terminal box is closed? (ওয়েল্ডিং মেশিনের তেল টার্মিনাল বক্স কি বন্ধ করা হয়েছে?)	yes	
4.3	Is safety earth cable & double insulated cable used for electric power distribution? (সিউইচিং ক্যাবল সুরক্ষার জন্য এবং ডাবল ইনসুলেটেড ক্যাবল বৈদ্যুতিক শক্তি বিতরণের জন্য ব্যবহার করা হয়েছে কি?)	yes	
4.4	Is the electrical cable connection is by fags & not by knot? (বৈদ্যুতিক ক্যাবল সংযোগ কি ফাগের মাধ্যমে এবং নোটে বা নোটে করা হয়েছে কি?)	yes	

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4.5	Is the RECC/LLS available for power supply? (পাওয়ার লাইন/লস্ট লাইন সিস্টেম)	Yes	
4.6	Are 3 or 5 bells used in DG? (ডিজেলের ৩ বা ৫ ঘণ্টা বাজানো করা হল)	Yes	
4.7	Is the rotating parts of DG guarded properly? (ডিজেল ঘূর্ণনশীল অংশ সুরক্ষিত করা হয়েছে কি?)	Yes	
5. Hoisting/Lifting			
5.1	Are the system of double chain snatch-whipping system adopted for removing of DMC pipe after completion of boring? (ডাবল চেইন স্ন্যাচ-হোপার সিস্টেম গ্রহণ করা হয়েছে ডিএমসি পাইপ সরানোর পরে?)	Yes	
5.2	Is the condition of stopper (chain) found ok without much opening? (স্টপার (চেইন) এর অবস্থা খারাপ ছাড়া খুব বেশি ফাঁকি নেই?)	Yes	
6. Dewatering Pump			
6.1	Is rotating parts guarded properly? (ঘূর্ণনশীল অংশ সুরক্ষিত করা হয়েছে কি?)	Yes	
7. Concrete Mixture Machine			
7.1	Are all rotating parts of machine guarded? (সকল ঘূর্ণনশীল অংশ সুরক্ষিত করা হয়েছে কি?)	Yes	
7.2	Are all machines involved for aggregate & cement placing with noise mask? (সকল যন্ত্রই যথেষ্ট শব্দমasks দিয়ে সুরক্ষিত করা হয়েছে কি?)	Yes	
7.3	Is the person who will stand on hopper with full body harness? (সকল যন্ত্রই যথেষ্ট শব্দমasks দিয়ে সুরক্ষিত করা হয়েছে কি?)	Yes	
RIAZ HOSSAIN S  Name & Signature of Supervisor or DIO Steward			

L&T Construction PTD, TL BU			
Name of Project: ADB PWD-9		Date of inspection: 17/04/25	
Location number: 98/1			
Sl no	Points to be checked	Status (Yes/No)	Corrective Action Status if No
1. Tripod (Before Piling & during Rig installation)			
1.1	Are the brand tags are fastened properly? (ব্র্যান্ড ট্যাগ কি ঠিকভাবে লাগানো আছে?)	Yes	
1.2	Are all the bolts of frame joint fixed properly and tightened, with no slack? (ফ্রেম জয়েন্টের বোল্ড ঠিকভাবে লাগানো এবং শক্ত করা হয়েছে, কোন লাক্স নেই?)	Yes	
1.3	Is the condition of main hanger satisfactory found on and free from any defect or damage? (প্রধান হ্যাংগার সন্তোষজনক পাওয়া গেছে এবং কোন ত্রুটি বা ক্ষতি ছাড়া মুক্ত?)	Yes	
1.4	Is the wire rope used for hoisting of L&T pipe, frame pipe found free from all defects like knot, kink, broken wire, etc and correct? (হিস্ট্রিং এর জন্য ব্যবহৃত তারের তারের মধ্যে কোন ত্রুটি, কল, ভাঙা তার, ইত্যাদি নেই এবং সঠিক?)	Yes	
1.5	Is the hook which is used for hoisting the main hanger? (প্রধান হ্যাংগার তুলার জন্য হুক ব্যবহৃত?)	No	Use D-Shackle
1.6	Are minimum of 3 no U-clamps included for splitting of wire rope? (তারের তারের বিভাজনের জন্য অন্তত 3টি U-ক্লাম্প অন্তর্ভুক্ত করা হয়েছে?)	Yes	
1.7	Are the gap between all U-clamps are equal? (সব U-ক্লাম্পের মধ্যে ফাঁক সমান?)	Yes	
1.8	Are the two section of U-clamp is smoothly free end of wire rope? (U-ক্লাম্পের দুইটি সেকশন তারের তারের মুক্ত প্রান্তের সাথে সঠিকভাবে মিলেছে?)	Yes	
2. Winch Machine (during Pile operation)			
2.1	Are all machine parts good? (সব মেশিন অংশ ভাল?)	Yes	
2.2	Are 2 no 1 bolts in use? (2টি 1 নং বোল্ড ব্যবহার করা হচ্ছে?)	Yes	
2.3	Is exhaust pipe available? (নিষ্কাশন পাইপ উপলব্ধ?)	Yes	
2.4	Is condition of piston & shaft found ok? (পিস্টন ও শ্যাফটের অবস্থা ঠিক?)	Yes	
2.5	Is condition of drive pipe & drum shaft found ok? (ড্রাইভ পাইপ ও ড্রাম শ্যাফটের অবস্থা ঠিক?)	Yes	
3. Welding machine			
3.1	Is welding machine covered by water sheet? (উল্লেখ করা হয়েছে?)	Yes	
3.2	Is body earth-connection for welding machine found? (উল্লেখ করা হয়েছে?)	Yes	
3.3	Is welding cable with earth clamp used for return path? (উল্লেখ করা হয়েছে?)	Yes	
3.4	Is the welding cable is free from any defect, joint & damage? (উল্লেখ করা হয়েছে?)	Yes	
3.5	Is weather having weather report, weather gauge & weather fan sheet? (উল্লেখ করা হয়েছে?)	Yes	
4. Diesel generator			
4.1	Is body earth of DG connected? (উল্লেখ করা হয়েছে?)	Yes	
4.2	Is the DG terminal box is properly earthed? (উল্লেখ করা হয়েছে?)	Yes	
4.3	Is only double core & double insulated cable used for electric power distribution? (উল্লেখ করা হয়েছে?)	Yes	
4.4	Is the electrical cable connection is by top & nut & bolt? (উল্লেখ করা হয়েছে?)	Yes	

4.5	Is the MCC/Battery available for power supply? (স্বয়ং পরিচালিত বাত (MCC/BATTERY) উপলব্ধ?)	Yes	
4.6	Are 5 out of 6 bolts used in the distribution box tight? (পাঁচ বাতাস কান বসে?)	Yes	
4.7	Is the rotary parts of the guarder properly? (গার্ডারের ঘূর্ণন অংশগুলি ঠিক-ঠিকভাবে রয়েছে কি?)	Yes	
5. Boring/Drilling			
5.1	Are the systems of double phase correct wrapping system adopted for removing of DMC pipe after completion of boring? (সঠিক (দুই ফেজের পের DMC) সঠিক ভাবে মোড়ানো করা হয়েছে (দুই ফেজের পের DMC) সঠিক ভাবে মোড়ানো হয়েছে কি?)	Yes	
5.2	Is the condition of stopper (hopper) found ok without much opening? (স্টপার (হোপার) খারাপ হয়েছে কি?)	Yes	
6. Dewatering Pump			
6.1	Is rotary parts guarded properly? (স্বয়ং পরিচালিত অংশগুলি সঠিকভাবে গার্ড করা হয়েছে কি?)	Yes	
7. Concrete Mixture Machine			
7.1	Are all rotary parts of machine guarded? (স্বয়ং পরিচালিত অংশগুলি সঠিকভাবে গার্ড করা হয়েছে কি?)	Yes	
7.2	Are all machines involved for aggregate & cement pouring with cover board? (সবগুলি মেশিনই অগ্রগতি ও সিমেন্ট ঢালাইয়ের জন্য কভার বোর্ড দিয়ে সুরক্ষিত করা হয়েছে কি?)	Yes	
7.3	Is the person who will climb on hopper with full body harness? (সব মেশিনই অগ্রগতি ও সিমেন্ট ঢালাইয়ের জন্য কভার বোর্ড দিয়ে সুরক্ষিত করা হয়েছে কি?)	Yes	
RIAZ HOSSAIN S. K. Name & Signature of Supervisor of this Ward			

Safety Checklist for Work at Height and Erection Work (Package 4)

Format No: TRANSRAIL/CONST./HSE/ER-CHK/012
Rev. No: 00
Date: 01.04.2021

Safety Checklist for Erection work

Date of Inspection: 01.05.25

Project: 230 kv DC Purbasadi part to Dohare T/L, ADB Package -1
Scope - A

Classification and Type of tower: T-1A/S 2DL + D

Inspector: Shahjalal Erection

Sr. No.	Description	Observation	Remark
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA	
2	All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc.	Safety Helmet-No. in use/total workers - 16/16 Safety Belt-No. in use/total workers - 04/16 Safety Shoe-No. in use/total workers - 16/16 Hand Gloves-No. in use/total worker - 16/16	
3	TLL officials are using PPEs at site.	YES/NO/NA	
4	Check all workers working at height have locked their safety belts.	YES/NO/NA	
5	Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower.	YES/NO/NA	
6	Check no distraction for the workmen while ascending / descending from the tower.	YES/NO/NA	
7	Check that winching underneath the tower is leveled properly.	YES/NO/NA	
8	Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work).	Derrick Pole = 61m Pole to the Pulleys (Open & Closed) = 10/300g Ropes/Slings (Wire Rope) = 06/16 PP Rope = 09 D Shackles and hooks = 28/30 Power Winch Machine = 01/100g Any other tools =	
9	Visual inspection of all TSP to be used at the site has been conducted with identification No. and found to be in healthy condition.	YES/NO/NA	
10	Nuts and bolts of the stub are fitted and reasonably tightened.	YES/NO/NA	
11	All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	YES/NO/NA	
12	Ensure proper guying arrangement for leg & Derrick Pole.	YES/NO/NA	
13	Ensure communication facility is available at the site.	YES/NO/NA	
14	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	YES/NO/NA	

Safety Checklist for Erection work		Formal No: TRANSRAIL/CONST/HSE/ER-CHECK/011
		Rev. No: 00
		Date: 01.04.2021
a) Ensure for safety measures during tower erection according to rule/standard/working power line.	YES/NO/NA	
b) Name of senior officials from T&L who available at site.	NAME:	
c) Accurate warning to public nearby ensured.	YES/NO/NA	
d) First Aid box with required items available at site.	YES/NO/NA	
e) Name & No. of First Aid trained workers.	YES/NO/NA	
f) Action taken for violation of safety norms, if any.	YES/NO/NA	
g) Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA	
h) Ensure the Skill Matrix completed after HSE induction. (Only for site regulars)	YES/NO/NA	
i) Ensure if any Child labour found at location during the work. (see per ID Proof)	YES/NO/NA	If Yes, then make statement
j) Ensure safety awareness poster/banner displayed at location.	YES/NO/NA	
k) Any other point specific to location (Mobile not to be use by contractor's staff/helper) during the height work.	YES/NO/NA	

Ashok

Supervisor/Engg.

01.05.25



HSE Officer/Engg.



Project Manager

Notes:

1. Height work permit should be granted only if, the checklist for erection work is filled.
2. Height Pass is mandatory for fitters who are engaged in the height work.
3. Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (only for new joining subcontractor/gang workers)

Safety Checklist for Erection work		Formal No TRANSRAE/CONST./HSE/ER-CHK/011	
		Rev. No: 00	
		Date: 01.04.2021	
Date of Inspection: 08.05.21			
Project: 230KV Dhaka Substation to Dhanbari Tr. Add. Package 1/ Sector-A			
T-2/6 Classification and Type of tower: 2D25+0m			
Tower No: Shahjahan Erection			
Sr. No.	Description	Observation	Remark
	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	✓ YES/NO/NA	
a)	All workers are using PPE at site i.e. Safety Helmets, Safety belts, Fall arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc.	Safety Helmet- No. in use/total workers - 16/16 Safety Belt- No. in use/total workers - 16/16 Safety Shoe- No. in use/total workers - 16/16 Hand Gloves- No. in use/total worker - 16/16	
b)	TLL officials are using PPEs at site.	✓ YES/NO/NA	
c)	Check all workers working at height have locked their safety belts.	✓ YES/NO/NA	
d)	Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower.	✓ YES/NO/NA	
e)	Check no distraction for the workers while ascending / descending from the tower.	✓ YES/NO/NA	
	Check that working underneath the tower is leveled properly.	✓ YES/NO/NA	
f)	Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work).	Derrick Pole - 01 in use Pulleys (Open & Closed) - 10/30 Ropes/Slings (Wire Rope) - 06/10 PP-Rope - 09 D-Shackles and Hooks - 28 Nos Power Winch Machine - 01 Nos Any Other tools -	
g)	Visual inspection of all T&P to be used at the site has been verified with identification No. and found to be in healthy condition.	✓ YES/NO/NA	
h)	All nuts and bolts of the stub are fitted and reasonably tightened.	✓ YES/NO/NA	
i)	All nuts and bolts and step lugs are fitted in tower and have been reasonably tightened before undertaking job of upper section of tower.	✓ YES/NO/NA	
j)	Ensure proper guying arrangement for leg & Derrick Pole.	✓ YES/NO/NA	
k)	Ensure communication facility is available at the site.	✓ YES/NO/NA	
l)	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	✓ YES/NO/NA	

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TTL'S RATE Safety Checklist for Erection work		Permit No: TRANSRA/L/CONST./HSE/ER-CHRI/011 Rev. No: 00 Date: 01.04.2021
a) Permit for safety measures during tower erection (ungrounded/earthed/energizing power line).	YES/NO/NA	☒
b) Name of senior officials from TTL who available at site.	Name:	
c) Adequate warning to public nearby ensured.	YES/NO/NA	☒
d) First Aid box with required items available at site.	YES/NO/NA	☒
e) Name & No. of First Aid trained workers.	YES/NO/NA	☒
f) Action taken for violation of safety norms, if any.	YES/NO/NA	☒
g) Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA	☒
h) Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	YES/NO/NA	☒
i) Ensure is any Child labour found at location during the work. (See job ID Proof)	YES/NO/NA	☒ If Yes, then state the action
j) Ensure Safety awareness poster/banner displayed at location.	YES/NO/NA	☒
k) Any other permit specific to location (Mobile not to be used by workers (Titter/Helper) during the height work.	YES/NO/NA	☒

Adhik

Site Supervisor/Engg.

Date: 08.05.25



HSE Officer/Engg.



Project Manager

Notes:

- Height work permit should be granted only if, the checklist for erection work is filled.
- Height Pass is mandatory for fitters who are engaged in the height work.
- Skill Matrix record is to be maintain after completing the HSE induction training of workers. (only for new joining subcontractor/gany workers)

Safety Checklist for Erection work		Format No. TRANSMI/CONST./HSE/ER-CHK/011 Rev. No: 00 Date: 01.04.2021	
Date of Inspection: 15.05.25			
Name of the Project: 232 Kv Dc Daman to Halibandha TL, ADF Bridge - 4, Sirp-EE			
No. T-19/b Classification and Type of tower: 1025 + 3m			
Structure: Skirted Erectors			
Sr. No.	Description	Observation	Remark
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA	
2	Check whether all workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall arrestors, Hi-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-jackets etc.	YES/NO/NA	Safety Helmet-No. in use/total workers -- 16/16 Safety Belt-No. in use/total workers -- 09/16 Safety Shoe-No. in use/total workers -- 16/16 Hand Gloves-No. in use/total worker -- 14/16
3	Check whether all workers are using PPEs at site.	YES/NO/NA	
4	Check all workers working at height have locked their safety belts.	YES/NO/NA	
5	Check whether workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower.	YES/NO/NA	
6	Check for distraction for the workmen while ascending / descending from the tower.	YES/NO/NA	
7	Check that winching underneath the tower is leveled properly.	YES/NO/NA	
8	Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLU staff before start of the work).	YES/NO/NA	Derrick Pole = 51m Pole = 08/16 Pulleys (Open & Closed) = 08/16 Ropes/Slings (Wire Ropes) = 05/16 PP Rope = 11 D Shackles and Hooks = 30/16 Power Winch Machine = 01/16 Any Other tools =
9	Visual inspection of all TSP to be used at the site has been done and found to be in healthy condition.	YES/NO/NA	
10	Check that all nuts and bolts of the mast are fitted and reasonably tightened.	YES/NO/NA	
11	Check that all nuts and bolts and step ladders are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	YES/NO/NA	
12	Check proper guying arrangement for leg & Derrick Pole.	YES/NO/NA	
13	Check communication facility is available at the site.	YES/NO/NA	
14	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	YES/NO/NA	

TRANSRAIL Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CH01/011 Rev. No. 05 Date: 01.04.2021	
10	a) Ensure for safety measures during tower erection near road/rail/river/adjacent power line.	YES/NO/NA	
	b) Name of senior officials from TLL who available at site.	Name:	
11	Adequate warning to public nearby ensured.	YES/NO/NA	
	First Aid box with required items available at site.		
12	Name & No. of First Aid trained workers.	YES/NO/NA	
	1. <u>Md. Jit Kumar</u>		
	2. <u>Md. Sabur</u>		
	3. <u>Md. Shauvicu</u>		
13	Action taken for violation of safety norms, if any.	YES/NO/NA	
14	Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA	
15	Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	YES/NO/NA	
16	Ensure is any Child labour found at location during the work. (As per ID Proof)	YES/NO/NA	If Yes, then mark therefore
17	Ensure Safety awareness poster/banner displayed at location.	YES/NO/NA	
18	Any other point specific to location. (Mobile not to be use by workers (Fitter/helper) during the height work.	YES/NO/NA	


 Site Supervisor/Engg.
 Date: 15-05-25


 HSE Officer/Engg.


 Project Manager

Notes:

- Height work permit should be granted only if, the checklist for erection work is filled.
- Height Pass is mandatory for fitters who are engaged in the height work.
- Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)

Pile Foundation Checklist Package 4

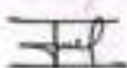
 Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/003
		Rev. No: 01 Date: 01.04.2023

1. To be filled up by the Site Supervisor /HSE Person (Piling Operation)

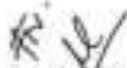
Name of the Project: *ADB - Bangladesh-4* Date of Inspection: *20.5.25*
 Name of the pile drivers: *md. Jakesia.* Loc No.- *77/-2*
 Name of Contractor: *FU Engg.* Pile machine number: *01*
 Type of machine: Normal / Rig / Tripod *✓*

2. Check Points before Piling

Sl. No	Description	Yes / No / NA
1.	Whether pile SOP / manual available at location?	<i>✓</i> Yes / No / NA
2.	To Check the underground utilities like, gas pipe lines and electrical cable line is essential.	<i>✓</i> Yes / No / NA
3.	Is there any obstacles from ground surface, if yes then remove.	<i>✓</i> Yes / No / NA
4.	To Ensure all pile driving equipments, const. design properly maintain or not.	<i>✓</i> Yes / No / NA
5.	Whether required warning signages are displayed at site or not?	<i>✓</i> Yes / No / NA
6.	To Ensure the hard Barrication with appropriate fencing, to prevent on lookers and unauthorized person trespassing into the work site.	<i>✓</i> Yes / No / NA
7.	To Ensure the proper lux illumination, especially at night work	<i>✓</i> Yes / No / NA
8.	To Ensure the proper arrangement of stacking of mud / slurry at location.	<i>✓</i> Yes / No / NA
9.	To Ensure the pile drive must be handled by the competent person.	<i>✓</i> Yes / No / NA
10.	To Ensure lifting hook should be properly welded or not?	<i>✓</i> Yes / No / NA
11.	To Ensure Exposed gears, flywheels, belts etc. is being guarded or not?	<i>✓</i> Yes / No / NA
12.	To Ensure third party testing done or not by the competent person.	<i>✓</i> Yes / No / NA
13.	Whether Bentonite MSDS is available at site or not?	<i>✓</i> Yes / No / NA
14.	To Ensure the proper PPEs like nose mask, goggles, gum boots, rubber hand gloves for mixing and handling the bentonite.	<i>✓</i> Yes / No / NA
15.	To ensure whether whistle, siren, horn or other effective signaling equipment with pile drivers available or not?	<i>✓</i> Yes / No / NA
16.	To Ensure the Emergency Equipments available at site or not?	<i>✓</i> Yes / No / NA


 Site Engg./Supervisor


 HSE Officer


 Section/Project I/C

CONTROLLED

Page no. 3

 CamScanner

 Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No.
		TRANSRAL/CONST/HSE/PFS-CHKL/021
		Rev. No: 01
		Date: 01.04.2021

Visual Inspection Check Points – To be checked & filled by machine operator along with site Engineer/Supervisor & HSE Persons.

Yes	NO	Item
		Pile Machine Cabin
		Cleanliness
		Door operational
		Deadman Pedal / Switch operational
		Handrails and ladders fitted and secure
		Seat adjustment operational secure with seat belt
		Warning devices and other lights (flashing, head, tail, etc) are appropriate for the environment in which plant is being used. (check environment more criteria particularly if working out of hours)
		Blow and Wrench
✓		Steering bolts fitted / tightened properly
✓		Oil leaks from hydraulic and gear box
✓		Test winch break on drum
✓		Check winches for leaks and damage and mounting bolts
✓		Limit switch on rope travel
✓		Does the pawl break function
✓		Brake operational
✓		Drivers free from leaks
		Environmental
✓		Clean, free of organic materials (mud, dirt, weeds, or seeds) prior to arrival
✓		Engine baffling or noise reduction equipment fitted as per manufacturers specifications
✓		Smoke from internal combustion engines should not be visible for more than ten seconds
✓		Sediment mud carried out ship bank
✓		Lubricant oil and other things don't drop the water
✓		Noise level & emission
		Drill Head
✓		Guarding installed
✓		Hydraulics
✓		Anchor points fitted for fall restraint systems
✓		Slides and feed rails not damaged and all bolts, pins/ retainers fitted
		Over the water
		Proper locking of crawler crane
		Crane barricading
		Ship edge fencing
		Life jacket & lifebuoy
		Train Diving & First Aider
		Speed Boat / Motor Boat
		Emergency Numbers display
		Meet Mountings
		Bolts, pins and retainers
		Rigging, fittings, sheaves & slings have Manufacturer's ID / Working Load Limit (WLL) attached or supply certificates
		Wire line, pulleys, guides, steel cable free from damage and wear
		Anti 2 block on service line (Auxiliary line)
		Sliding pawl wear condition
		Damage, cracks in mounting plates
		Booms angle indicator
		Other
		Drill mode not allowing the operator to leave the seat with drill head turning
		Transport mode allowing the operator to leave the seat and motor runs
		Life section pins and retainers
		Warning Signs - Danger Beware Overhead Wires & Underground Services
		Undercarriage
		Tracks complete and undamaged
		Idlers / Rollers
		Drivers free from leaks
		Track Adjuster Spools
		Hydraulic System & Engine
		Rams / Hoses / Connector
		Pins / Mounting & hydraulic isolator
		Engine or Exhaust guarded
		Air cleaner system & Battery condition


Operator


Site Engg./Supervisor


HSE Officer

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 TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Form No.
		TRANSRAIL/CONST/HSE/PFS-CHRL/021
		Rev. No: 01 Date: 01.04.2021

1. To be filled up by the Site Supervisor /HSE Person (Piling Operation)

Name of the Project: *ADB - Bernifladell* Date of Inspection: *02.05.21*
 Name of the pile drivers: *Mr. Mozidul* Loc No.: *1A/0*
 Name of Contractor: *Molla. Trc* Pile machine number: *02*
 Type of machine: Normal / Rig / Tripod

2. Check Points before Piling

Sl. No	Description	Yes / No / NA
1.	Whether pile SOP / manual available at location?	☒ Yes / No / NA
2.	To Check the underground utilities like, gas pipe lines and electrical cable line is essential.	☒ Yes / No / NA
3.	Is there any obstacles from ground surface, if yes then remove.	☒ Yes / No / NA
4.	To Ensure all pile driving equipments, const. design properly maintain or not.	☒ Yes / No / NA
5.	Whether required warning signages are displayed at site or not?	☒ Yes / No / NA
6.	To Ensure the hard Barrication with appropriate fencing, to prevent on lookers and unauthorized person trespassing into the work site.	☒ Yes / No / NA
7.	To Ensure the proper lux illumination, especially at night work	☒ Yes / No / NA
8.	To Ensure the proper arrangement of stacking of mud / slurry at location.	☒ Yes / No / NA
9.	To Ensure the pile drive must be handled by the competent person.	☒ Yes / No / NA
10.	To Ensure lifting hook should be properly welded or not?	☒ Yes / No / NA
11.	To Ensure Exposed gears, flywheels, belts etc. is being guarded or not?	☒ Yes / No / NA
12.	To Ensure third party testing done or not by the competent person.	☒ Yes / No / NA
13.	Whether Bentonite MSDS is available at site or not?	☒ Yes / No / NA
14.	To Ensure the proper PPEs like nose mask, goggles, gum boots, rubber hand gloves for mixing and handling the bentonite.	☒ Yes / No / NA
15.	To ensure whether whistle, siren, horn or other effective signaling equipment with pile drivers available or not?	☒ Yes / No / NA
16.	To Ensure the Emergency Equipments available at site or not?	☒ Yes / No / NA

Site Engg./Supervisor

HSE Officer

Section/Project I/C

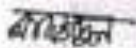
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 Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No.
		TRANSRAIL/CONST/HSE/PFS-CHKL/033
		Rev. No: 03
		Date: 01.04.2023

Visual Inspection Check Points – To be checked & filled by machine operator along with site Engineer/Supervisor & HSE Persons.

Yes	NO	Item
		Pile Machine Cabin
		Cleanliness
		Door operational
		Deadman Pedal / Switch operational
		Handrails and ladders fitted and secure
		Seat adjustments operational secure with seat belt
		Warning devices and other lights (flashing, head, tail, etc) are appropriate for the environment in which plant is being used. (check environment noise criteria particularly if working out of hours)
		Saw and Winch
		Saw ring bolts fitted / tightened properly
		Oil leaks from hydraulics and gear box
		Test winch break on drum
		Check winches for leaks and damage and mounting bolts
		Limit switch on rope travel
		Does the pawl break function
		Brake operational
		Driveline free from leaks
		Environmental
		Clean, free of organic materials (mud, dirt, weeds, or seeds) prior to arrival
		Engine baffling or noise reduction equipment fitted as per manufacturer's specifications
		Smokes from internal combustion engines should not be visible for more than ten seconds
		Bentonite mud carried out ship tank
		Lubricant oil and other things don't drop the water
		Noise level & emission
		Drill Head
		Guarding installed
		Hydraulics
		Anchor points fitted for fall restraint systems
		Slides and feed rails not damaged and all bolts, pins/ retainers fitted
		Over the water
		Proper locking of crawler crane
		Crane barricading
		Ship edge fencing
		Life jacket & lifebuoy
		Train Diving & First Aid
		Speed Boat / Motor Boat
		Emergency Numbers display
		Meat Mountings
		Bolts, pins and retainers
		Rigging, fittings, shrouds & slings have Manufacturer's ID / Working Load Limit (WLL) attached or supply certificates
		Wire line, pulleys, guides, steel cable free from damage and wear
		Anti T block on service line (Auxiliary line)
		Sliding pad wear condition
		Damage, cracks in mounting plates
		Beam angle indicator
		Other
		Drill mode not allowing the operator to leave the seat with drill head turning
		Transport mode allowing the operator to leave the seat and motor turn
		Job section pins and retainers
		Warning Signs - Danger Beware Overhead Wires & Underground Services
		Underside
		Tracks complete and undamaged
		Idlers / Rollers
		Driveline free from leaks
		Track Adjuster Sprockets
		Hydraulic System & Engine
		Rams / Hoses / Connector
		Pins / Mounting & hydraulic isolator
		Engine or Exhaust guarded
		Air cleaner system & Battery condition


Operator


Site Engineer/Supervisor


HSE Officer

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Appendix A-1: Stringing Checklist Package

TRANSRAIL Transmission Engineering Solutions		Safety Checklist for Stringing work		Format No: TRANSRAIL/CONST./HSE/STR-CH01/012 Rev. No: 00 Date: 01.04.2021	
				Date of inspection: 12.05.21	
Name of the Project: 230 KV D/S. Purbasiddi Bar to Dourat Project Code: 61-4F					
Loc. No. P-6/D Section/Stretch from Loc. No. P-5/D to Loc. No. P-6/D					
Nature of work: Insulator Hanging, Pilot wire/Conductor laying out, Rough Sag, Final sag, Clipping operation etc.					
Name of Contractor: Shakti Jol Engineering					
In. No.	Description	Observation	Remark		
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA			
2	End tower have been barricaded properly to avoid villagers or public interference / gathering.	YES/NO/NA			
3	a) All workers are using PPE at site i.e. Safety Helmets, Gum boots, Hand Gloves, R. Fall arrestor, Safety belt, shoes, R-Jacket etc.	Safety Helmet- No. in use/ total worker- 22/22 Safety Belt- No in use/ total worker- 07/22 Safety Shoe- No. in use/ total worker- 22/22 Hand Gloves- No. in use/ total worker- 22/22			
	b) TLL officials are using PPEs at site.	YES/NO/NA			
	c) Check all workers working at height have locked their safety belts.	YES/NO/NA			
	d) Ensure workers are using mobile/horizontal fall arrestor while ascending/descending from tower.	YES/NO/NA			
	e) Check no distraction for the workmen while ascending / descending from the tower.	YES/NO/NA			
4	Check that all Nuts and Bolts including step bolts have been tightened and punched properly before starting the job.	YES/NO/NA			
5	Check all members are fitted in towers before undertaking conductor laying work.	YES/NO/NA			
6	a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work). a) Visual inspection of T&P need to be done before start the work.	Tensioner M/C = 01 Puller M/C = 01 Pulleys (Open & Closed) = 25 nos Ropes/Slings (Wire Ropes) = 26 PP Rope = 22 D Shackles and hooks = 98 Nos Any Other tools = 12 nos Mobile			
7	Check if clips in insulator caps are fixed properly and necessary security pins (Split pins) are also fixed.	Confirmation of worker/ Contractor Ground sample checking	YES/NO YES/NO		
8	Ensure that rollers have Poly Propylene Coating.	a) Confirmation from contractor: b) Sample checking by TLL on rollers lying at ground:	YES/NO YES/NO		

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		Safety Checklist for Stringing work		Format No: TRANSRAIL/CONST./HSE/STR-CHK/012 Rev. No: 00 Date: 01.04.2021
9	Winch, Pulley, TSC machines are properly earthed.			YES/NO/NA
10	Condition of earthing equipment (Electrical tested) and quantity.			YES/NO/NA
11	a) Check that PTW obtained from competent authority for EHV/HV/LT lines, proper earthing of existing lines has been done.			YES/NO/NA
	b) Ensure earthing should not be done by single worker, one or more experienced worker should accompany him.			YES/NO/NA
	c) Site engineer/ supervisor to ensure proper earthing done in their presence at both end of section. While removing earthing Site Engineer/Supervisor should be present.			YES/NO/NA
12	For LT lines, Special precautions have been taken against inadvertent charging and one person is deputed at STR station till return of PTW.			YES/NO/NA
13	Condition of scaffolding provided at road /railway and power line crossings and protection below.			YES/NO/NA
14	a) Check for safety measures during stringing near Road/ Rail /River/ Power line crossings. Name of Sr. Officials from TLL available at the site.			YES/NO/NA
15	No. of walkie Talkie available at the site.			YES/NO/NA
16	Deployment of Flag man on each tower during paying out of pilot wire and also during stringing of the conductor.			YES/NO/NA
17	To ensure Adequate warning through public address system to nearby public.			YES/NO/NA
18	Ensure Brake arrangement is working.			YES/NO/NA
	a) TSE Machines			YES/NO/NA
	b) Conductor drum stand.			YES/NO/NA
	c) E/W run.			YES/NO/NA
19	The tower has been permanently earthed.			YES/NO/NA
20	Condition of the power winch machine.			YES/NO/NA
21	Check only stringing team members are allowed to stand near the tower while stringing is in progress.			YES/NO/NA
22	Check final sag operation is being done through winch machine not through couple of tractors.			YES/NO/NA
23	Completion of final sag, check whether workers adopt short cut method of descending from conductor with the help of rope and come along clamp or back through tower.			YES/NO/NA
24	First Aid box with required items are available at the site. Name & No. of First Aid trained worker a) <u>Hasanul Islam Md. Saif Md. Shaukat</u>			YES/NO/NA
25	Violation slip issued or not in HSE violation if any.			YES/NO/NA
26	To Ensure proper usage of Sag bridge/insulator ladder at location.			YES/NO/NA
27	To Ensure the availability of Height Pass Cum ID card at location.			YES/NO/NA
28	To Ensure the Skill Matrix part/Competency. (Only for new workers)			YES/NO/NA
30	To Ensure Safety awareness poster/banner at location.			YES/NO/NA
31	Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.			YES/NO/NA
 Site Supervisor/Engg. Date: 13.05.25		 HSE Officer/Engg.		 Project Manager

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Package 7

Pre-shift Safety Activity Record

Record No: 00000-000

Substation name	Barsha, PSC/132/130-00/06	Date	30.05.2023
Work detail	PTA work on 132/130-00/06	Priority	1/5
Organizer		Recorder	Abdur Jaleel

Comments

1. Workers use full armor and full body harness for high rated work.

2. Keep a good communication during teamwork while handling/exchanging a sticky work.

3. Keep drinking water, fire extinguisher, first aid box near construction work.

4. No firefighting tools were found near welding work.

Solution: Arranged a set of fire extinguisher.

No.	Items	Checking for	Result
3.1	PPE is adequate and qualified or not		Yes
3.2	Workers get correct PPE or not		Yes
3.3	Workers correctly wear the PPE or not		Yes
3.4	Physical condition of workers		Yes
3.5	Worker gets correct tools or not		Yes
3.6	Worker understands what's he has to do		Yes
3.7	All the tools and machinery in good condition		Yes
3.8	Class and equipment is in good condition		Yes
3.9	Use work/life/light, ventilation, fire prevention, etc.		Yes
3.10	Whether any hidden danger		No
3.11	Is there any person who supervised safety during work		Yes
3.12	Whether there is emergency response measures		Yes

4. Others need to be fixed

Signature of all attendees: *Abdur Jaleel, PSC, 132/130-00/06, 30.05.2023*

Organizer: *Abdur Jaleel*

Pre-shift Safety Activity Record

Record No: 00000-000

Substation name	Barsha, PSC/132/130-00/06	Date	31-05-2023
Work detail	PTA work on 132/130-00/06	Priority	1/5
Organizer		Recorder	Muhammad

Comments

1. All workers must use proper safety gear.

2. Use ladder whenever working work.

3. All workers must be removed at working place.

Checklist

1. Ensure safety: 100% and correct precaution measures during the work.

2. Ensure scaffold must be clamping with chain.

No.	Items	Checking for	Result
3.1	PPE is adequate and qualified or not		Yes
3.2	Workers get correct PPE or not		Yes
3.3	Workers correctly wear the PPE or not		Yes
3.4	Physical condition of workers		Yes
3.5	Worker gets correct tools or not		Yes
3.6	Worker understands what's he has to do		Yes
3.7	All the tools and machinery in good condition		Yes
3.8	Class and equipment is in good condition		Yes
3.9	Use work/life/light, ventilation, fire prevention, etc.		Yes
3.10	Whether any hidden danger		No
3.11	Is there any person who supervised safety during work		Yes
3.12	Whether there is emergency response measures		Yes

4. Others need to be fixed

Signature of all attendees: *Abdur Jaleel, PSC, 132/130-00/06, 31-05-2023*

Organizer: *Muhammad*

Monthly Hidden Hazard Inspection (Monthly Safety Inspection)			
Subcontractor	Mazumder 'bakepate' - Location/Site		Rupsha.
Month	December - 24	Check Date	10.12.24
Conductor		Recorder	Main Ussin
Attendees:	Mr. Bipra Basu, Mr. Shamin Ahmed Mr. Main Ussin		
No.	Location/Activities	Hidden dangerous	Rectification measures
1	field	Electrical cable.	All Electrical cable must be underground Cable joint must be Taping by PVC Tap.
2			
3			
4			
5			
6			

Monthly Safety Minutes Of Meeting			
Subcontractor	Morandes Enterprise	Location/Site	Rupsha.
Month	Dec- 24	Conductor	
Attendees	Main Uddin -  Bipra Basu -  Shamim Hamed - Shamim Shourab -  Mostafa - Mostafa Md. Jafar Khan - 		
Contents	1. Safety briefing everyday before Starting work. 2. All Electrical tools and equipment check must be. before Starting work. 3. All worker used proper safety (PPE). 4. No Smoke work zone.		
			
Fig-1 Everyday Safety briefing before starting work.		Fig-2 Monthly safety meeting with ME official (site)	

Signature by conductor

Recorder:

Main Uddin

Annexure-28: Environmental Management Implementation Schedule (July– December 2025)

Environmental Issues/Parameters	Monitoring Parameters	Standards/Guidelines	Means of Monitoring	Frequency	Location
Requirement of land	Ensure that PAPs get compensation as per RP	As per RP	Inspection	As per RP	RoW of the package 2, 3 and 4
Trimming of trees clearing vegetation	Checking whether proper compensation as mentioned in RP is received by PAPs.	DoE/FD	Inspection	Regular during tree felling and site clearing operations	RoW of the package 2, 3 and 4
Ambient Air Quality Parameters	SPM, PM10, PM2.5, SOx, NOx, CO & Pb- 24hr monitoring	DoE standards	Monitoring report analysis	Before construction	At representative tower and substation construction sites
Noise Pollution	Ambient noise level	DoE standards	Monitoring report analysis	Regularly during construction	At adjacent subproject cultural sites and construction camps
Pollution due to Wastes	Checking storage, transportation, handling, and disposal of wastes.	DoE guidelines	Inspection	Regular	Construction sites and camps of Package 2-7
Surface Water Quality	pH, BOD5, COD, NH3-N, PO4, TPH and coliforms	DoE Standards	Monitoring report analysis	At all river crossings and within 500m of waterbodies	River Crossing Sites near towers
Groundwater /Drinking Water Quality	pH, Mn, Fe, As, TC, FC, TPH, Salinity and Hardness	DoE Standards	Monitoring report analysis	Quarterly at all tube wells within 500m	At representative tower construction sites
Traffic congestion/ Road Accident	Checking road crossing points, roads adjacent to towers.	BRTA	Inspection	Regular	At road/railway. crossing points and roads adjacent to towers
Occupational health and safety	Use of PPE, general health, water supply and sanitation.	DoE/IFC guidelines	Inspection	Regular	At construction sites and camps
Community health and safety	Awareness of local people.	DoE/IFC guidelines	Inspection	Regular	At tower construction sites and crossing of roads

Annexure-29: PPE Inventories

Package 2



PPE Inventory

Package: 02

Date: - 28 June 2025

SL-AS/DG	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE : SHOULDER; MAKE : Alcatel; MODEL : AM-206 FR	Numbers		0.0
2	ANEMOMETER; TYPE : DIGITAL; MAKE : EXTECH; MODEL : AN300	Numbers		1.0
3	BIT TO CLAMP; MAKE : MS; DIA : 12 - 14 MM	Numbers		5.0
4	SAFETY SHOE; APPLICATION : for staff; MATERIAL : leather; TYPE : Male; PATTERN : With steel toe; TYPE OF SOLE : Polyurethane sole; Electrical grade	Pairs		15.0
5	GUM BOOTS; MATERIAL : PVC; PATTERN : With steel toe; (Full length); Staff	Pairs		11.0
6	ROCK CHAIR; MATERIAL : Nylon Polyester; SIZE : Width - 40 cm; Capacity : 250KG	Numbers		11.0
7	GUM BOOTS; MATERIAL : PVC; PATTERN : With steel toe; (Full length); Worker	Pairs		25.0
8	SAFETY HELMET; MATERIAL : HDPE; TYPE : Ratchet; With chin strap	Numbers		48.0
9	ROPE GRAB FALL ARRESTER; anchorage (slings)	Numbers		7.0
10	SHOULDER PAD; MATERIAL : leather;	Numbers		14.0
11	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; OTHER SPECIFICATIONS : With chin strap	Numbers		48.0
12	LEATHER HAND GLOVES; APPLICATION : Welding work; long; OTHER SPECIFICATIONS : With inside cotton lining	Pairs		14.0



13	APRON, APPLICATION : Welding work; MATERIAL : (leather); OTHER SPECIFICATIONS : With full sleeves;	Numbers		16.0
14	REFLECTIVE JACKET, MATERIAL : Polyester (80/20%);	Sets		256.0
15	FULL BODY SAFETY HARNES, MATERIAL : Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets		5.0
16	ANCHORAGE LINE, MATERIAL : PULWASH ROPE; LENGTH : 96 m; SIZE : 14 mm DIA;	Numbers		11.0
17	COTTON HAND GLOVES; GRADE : Grade - I; SIZE : 10 long; WEIGHT : 80; With latex coating on one side;	Pairs		14.0
18	RUBBER HAND GLOVES; APPLICATION : Electrical work; GRADE : (13 KV); SIZE : 14 long; Anti/slip prod;	Pairs		20.0
19	NOSE MASK; MATERIAL : Cotton; TYPE : Reusable;	Numbers		124.0
20	SURGICAL GLOVES; Reusable Washable Rubber Gloves;	Pairs		300.0
21	MEDICINES, FIRST AID MEDICINE KIT	Numbers		15.0
22	FIRE EXTINGUISHER ABC TYPE; CAPACITY : 4 kg;	Numbers		14.0
23	FIRE BUCKETS; CAPACITY : 9 L; NUMBERS : 3; OTHER SPECIFICATIONS : With Stand & Carrying;	Numbers		14.0
24	MEDICINES, HAND SANITIZER REFILL 5 LTR	Numbers		20.0
25	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY : 5 kg; OTHER SPECIFICATIONS : Well mounted With stand;	Numbers		11.0

Package 3

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
PPE Inventory

SL-NO/ISS	Package: 3	Date: -	6/15/2025	Available QTY
	PPE Item	Unit	RECEIVED QTY	
1	MEGA PHONE; TYPE :- SHOULDER, MAKE :- Alpaca; MODEL :- AM-30H FA;	Numbers	7.0	7.0
2	Ear Plug	Numbers	50.0	50.0
3	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTech; MODEL :- AN300;	Numbers	7.0	7.0
4	KITTO CLAMP; MOC :- MS, DIA :- 12 - 14 MM;	Numbers	20.0	20.0
5	SAFETY SHOEL; APPLICATION :- for staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	5.0	5.0
6	SAFETY SHOEL; APPLICATION :- for staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	5.0	5.0
7	SAFETY SHOEL; APPLICATION :- for staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	5.0	5.0
8	SAFETY SHOEL; APPLICATION :- for staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	5.0	5.0
9	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	20.0	20.0
10	ROCK CHAMP; MATERIAL :- Nylon Polyester; SIZE :- Width :- 44 mm; Capacity :- 23lit;	Numbers	25.0	25.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	25.0	25.0
12	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	25.0	25.0
13	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo;	Numbers	200.0	200.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

Sl. #/Action	Package: 3	Date: -	6/15/2025	Available QTY
	PPE Item	Unit	RECEIVED QTY	
14	SAFETY SHOE, APPLICATION - For workmen; MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 7, Electrical grade.	Pairs	45.0	45.0
15	ROPE GRAB FALL ARRESTER, SIZE - 50 m long anchorage (Rope).	Numbers	60.0	60.0
16	SAFETY SHOE, APPLICATION - For workmen; MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Direct injected PVC sole, SIZE - 6, Electrical grade.	Pairs	45.0	45.0
17	SHOULDER PAD, MATERIAL - Leather.	Numbers	200.0	200.0
18	SAFETY HELMET, MATERIAL - HDPE, TYPE - Nape, COLOUR - Yellow, OTHER SPECIFICATIONS - With chin strap.	Numbers	995.0	995.0
19	SAFETY HELMET, MATERIAL - HDPE, TYPE - Bucket, COLOUR - Blue, OTHER SPECIFICATIONS - With chin strap.	Numbers	10.0	10.0
20	LEATHER HAND GLOVES, APPLICATION - Welding work, SIZE - 14 long, OTHER SPECIFICATIONS - With inside cotton lining.	Pairs	1000.0	1000.0
21	SAFETY HELMET, MATERIAL - HDPE, TYPE - Nape, COLOUR - Yellow, With chin strap, with embossed L&T logo.	Numbers	0.0	0.0
22	ROPE GRAB FALL ARRESTER, CE certified conforming to EN 353 - 2 - 2005, made of solid steel with galvanized coating / stainless steel. Gravity locking mechanism 14 mm opening.	Numbers	120.0	120.0
23	RETRACTABLE FALL ARRESTER BLOCK, LENGTH - 25 m, CE certified and conforming to EN 360:2002 casing made up of high impact strength polymer, comes with galvanized steel wire rope of dia. 4.5mm; provided with coiled wrap hook anchorage eye with swivel action.	Numbers	20.0	20.0
24	SAFETY HELMET REBEL, TYPE - Bucket, OTHER SPECIFICATIONS - With nylon chin strap.	Numbers	100.0	100.0
25	APRON, APPLICATION - Welding work; MATERIAL - Leather, OTHER SPECIFICATIONS - With full sleeves.	Numbers	10.0	10.0
26	SAFETY SHOE, APPLICATION - For workmen; MATERIAL - PVC, PATTERN - With steel toe, TYPE OF SOLE - Direct injected PVC sole, SIZE - 6.	Pairs	45.0	45.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

Sl. No.	Package: 3	Date: -	6/15/2025	Available QTY
	PPE Item	Unit	RECEIVED QTY	
27	REFLECTIVE JACKET, MATERIAL - Polyester (80 GSM), COLOUR - Orange, Reflective tape - more prismatic reflective tapes 5 cm. wide total length-200 cm. reflective L&T logo with L&T LIFE & TRACIC MARSHALL logo at front and back opening type: front	Sets	500.0	500.0
28	SAFETY SHOE, APPLICATION - For workmen, MATERIAL - PVC, PATTERN - With steel toe, TYPE OF SOLE - Direct injected PVC sole, SIZE - 8	Pairs	40.0	40.0
29	FULL BODY SAFETY HARNESS, MATERIAL - Nylon, WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT	Sets	120.0	120.0
30	SAFETY SHOE, APPLICATION - For staff, MATERIAL - PU, PATTERN - With steel toe, TYPE OF SOLE - Direct injected single density polyurethane sole, SIZE - 8	Pairs	5.0	5.0
31	ANCHORAGE LINE, MATERIAL - POLYAMIDE ROPE, LENGTH - 60 m, SIZE - 14 mm DIA,	Numbers	10.0	10.0
32	SAFETY HELMET, MATERIAL: PVC, TYPE: Load carrying, COLOUR - yellow, WITH chin strap	Numbers	40.0	40.0
33	REFLECTIVE JACKET, MATERIAL - Polyester (110 GSM), COLOUR - Green, 3M Glass Bead reflective tape- 5 cm wide Total length -232 cm reflective L&T logo at front and back, opening type: front vent with 2-3 large Velcro	Sets	43.0	43.0
34	COTTON HAND GLOVES, GRADE - Grade - I, SIZE - 20 (Long), WEIGHT - 80, With latex coating on one side,	Pairs	0.0	0.0
35	RUBBER HAND GLOVES, APPLICATION - Electrical work, GRADE - 33 KV, SIZE - 14 (Long, Acid/Alkali proof,	Pairs	20.0	20.0
36	NOSE MASK, MATERIAL - Cotton, TYPE - Reusable,	Numbers	100.0	100.0
37	SAFETY SHOE, MATERIAL - PU, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade,	Pairs	10.0	10.0
38	SAFETY SHOE, MATERIAL - PU, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade,	Pairs	10.0	10.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

Sl. No.	Package: 3	Date: -	6/15/2025	Available QTY
	PPE Item	Unit	RECEIVED QTY	
39	SAFETY SHOES; MATERIAL : PU; TYPE : Male; PATTERN : With fibre toe; TYPE OF SOLE : Polyurethane sole; SIZE : 8; Electrical grade;	Pairs	10.0	10.0
40	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; COLOUR : Green; With chin strap;	Numbers	10.0	10.0
41	RETRACTABLE TAIL ARRESTER BLOCK; MATERIAL : Polymer; LENGTH : 15 m;	Numbers	10.0	10.0
42	REFLECTIVE JACKET; MATERIAL : Polyester (80 100%); COLOUR : Orange Red; SIZE : Medium (M); With full sleeves;	Numbers	100.0	100.0
43	SAFETY SHOES; MATERIAL : PU; TYPE : Male; PATTERN : With fibre toe; TYPE OF SOLE : Polyurethane sole; SIZE : 9; Electrical grade;	Pairs	20.0	20.0
44	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; COLOUR : Red; With chin strap;	Numbers	30.0	30.0
45	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; COLOUR : Red; With chin strap;	Numbers	30.0	30.0
46	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	40.0	40.0
47	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	10.0	10.0
48	FIRE EXTINGUISHER ABC TYPE; CAPACITY : 4 kg;	Numbers	6.0	6.0
49	FIRE BUCKETS; CAPACITY : 9 L; NUMBERS : 5; OTHER SPECIFICATIONS : With Stand & Canopy;	Numbers	24.0	24.0
50	MEDICINES; HAND SANITIZER REFILL 5 LTR	Numbers	1.0	1.0
51	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY : 5 kg; OTHER SPECIFICATIONS : Wall mounted with stand;	Numbers	10.0	10.0
52	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE : CO2; CAPACITY : 6.5 kg; OTHER SPECIFICATIONS : Wall mounted;	Numbers	5.0	5.0
53	FIRE BUCKET STAND; TYPE : T type;	Numbers	24.0	24.0
54	SAFETY BARRICADE TAPE; MATERIAL : LDPE; TYPE : Reflective; COLOUR : Red & white stripes; WIDTH : 75 mm; THICKNESS : 50 microns; OTHER SPECIFICATIONS : 500 m roll;	Numbers	200.0	200.0
55	TESTER; TYPE : Hybrid measurable induction Type;	Numbers	20.0	20.0
56	Safety Maninggan ; TYPE : FULL BODY; OTHER SPECIFICATIONS : With pants;	Numbers	50.0	50.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

Sl-#/A/C/MS	Package: 3	Date: -	6/15/2025	Available QTY
	PPE-Item	Unit	RECEIVED-QTY	
57	SAFETY BARRICADE TAPE, MATERIAL :- LDPE, TYPE :- Reflective, COLOUR :- Red & white stripes, WIDTH :- 75 mm, THICKNESS :- 50 microns, OTHER SPECIFICATIONS :- 500 m roll,	Numbers	200.0	200.0
58	DISCHARGE ROD, TYPE :- Telescopic, DISCHARGE VOLTAGE :- 11 kV, WIRE SIZE :- 10 mm ² , WIRE LENGTH :- 15 m,	Numbers	30.0	30.0
59	TESTER, TYPE :- Ratchet Inductance Induction type,	Numbers	20.0	20.0
60	TESTER, TYPE :- Pen Type,	Numbers	20.0	20.0
61	DISCHARGE ROD, TYPE :- Telescopic, DISCHARGE VOLTAGE :- 11 kV, WIRE SIZE :- 10 mm ² , WIRE LENGTH :- 15 m,	Numbers	30.0	30.0
62	TRAFFIC SAFETY CONE, MATERIAL :- LDPE, SIZE :- 750 mm height, With heavy rubber base,	Numbers	50.0	50.0
63	TOOL LIFTING BAG, 25 kg,	Numbers	100.0	100.0
64	STRETCHER, TYPE :- canvas cover wooden spine support,	Numbers	5.0	5.0
65	SAFETY BARRICADE TAPE, MATERIAL :- PVC, TYPE :- Reflective, COLOUR :- Red & white stripes, WIDTH :- 75 mm, THICKNESS :- 100 microns,	Numbers	200.0	200.0
66	TRAFFIC SAFETY CONE, MATERIAL :- LDPE, SIZE :- 750 mm height, With heavy rubber base,	Numbers	50.0	50.0
67	MEDICAL EQUIPMENT AS DESCRIBED FURTHER, Ambu Bag,	Numbers	10.0	10.0
68	EARTH ROD DRIVING SPIKE, MATERIAL :- GI, SUITABLE FOR :- 16 mm dia. rod,	Numbers	60.0	60.0
69	BINOCLAR, MANT :- Bushnell, MODEL :- 131250,	Numbers	10.0	10.0

Package 4

PPE Inventory

Date: - 30.05.2025

SL#A3/D65	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE - SHOULDER; MAKE - Atraje; MODEL - AM-20H FA ;	Numbers	2.0	2.0
2	KITTO CLAMP; MOC - MS; DIA - 12 - 14 MM;	Numbers	12.0	12.0
3	SAFETY SHOES; APPLICATION - For staff; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 6;	Pairs	30.0	5.0
4	SAFETY SHOES; APPLICATION - For staff; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 8; Electrical grade;	Pairs	30.0	5.0
5	SAFETY SHOES; APPLICATION - For staff; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 9; Electrical grade;	Pairs	10.0	8.0
6	SAFETY SHOES; APPLICATION - For staff; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 10; Electrical grade;	Pairs	30.0	10.0
7	GUM BOOTS; MATERIAL - PVC; PATTERN - With steel toe; SIZE - 7 (full length);	Pairs	60.0	30.0
8	ROCK CHAIR; MATERIAL - Nylon Polyester; SIZE - Width - 44 mm; Capacity - 230N;	Numbers	0.0	0.0
9	GUM BOOTS; MATERIAL - PVC; PATTERN - With steel toe; SIZE - 8 (full length);	Pairs	50.0	10.0
10	GUM BOOTS; MATERIAL - PVC; PATTERN - With steel toe; SIZE - 9 (full length);	Pairs	50.0	10.0
11	SAFETY HELMET; MATERIAL - HDPE; TYPE - Ranchet; COLOUR - White; With chin strap;	Numbers	100.0	60.0
12	SAFETY SHOES; APPLICATION - For workmen; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 7; Electrical grade;	Pairs	250.0	100.0
13	ROPE GRAB FALL ARRESTER; SIZE - 50 m ring anchorage lifeline;	Numbers	15.0	6.0
14	SAFETY SHOES; APPLICATION - For workmen; MATERIAL - Leather; TYPE - Male; PATTERN - With steel toe; TYPE OF SOLE - Direct injected PVC sole; SIZE - 6; Electrical grade;	Pairs	50.0	20.0
15	SHOULDER PAD; MATERIAL - Leather;	Numbers	100.0	50.0
16	SAFETY HELMET; MATERIAL - HDPE; TYPE - Nape; COLOUR - Yellow; OTHER SPECIFICATIONS - With chin strap;	Numbers	100.0	150.0
17	LEATHER HAND GLOVES; APPLICATION - Welding work; SIZE - 14 long; OTHER SPECIFICATIONS - With inside cotton lining;	Pairs	300.0	200.0

Fox Transworld Lighting Ltd.
Kishore Kumar
DGM, MSE

18	RETRACTABLE FALL ARRESTER BLOCK; LENGTH > 10 m;	Numbers	50.0	10.0
19	APRON; APPLICATION :- Working work; MATERIAL :- Leather	Numbers	10.0	10.0
20	FULL BODY SAFETY HARNESS;	Sets	100.0	60.0
21	COTTON HAND GLOVES; (GRADE :- Grade 1; SIZE :- 10" long; WEIGHT :- 80; With latex coating on one side;	Pairs	1000.0	500.0
22	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	500.0	200.0
23	MEDICINES SNAKE BITE MEDICINE KIT	Numbers		
24	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	15.0	15.0
25	FIRE BUCKETS-;	Numbers	20.0	20.0
26	TOOL LIFTING BAG; 25 kg;	Numbers	10.0	5.0
27	BINOCULAR;	Numbers	2.0	2.0
28	EAR PLUG	Number	100	20.0

For Transmitted Copying 1st
 Kishore Kumar Mahanta
 DG, MSE Engineer

Package 5

**PPE Inventory**

Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj
on turnkey basis (Package-5)

Date 30.06.2025

SJ. No	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE, TYPE - SHOULDER, MAKE - Anuga, MODEL - AM J3M FA.	Numbers	2.0	2.0
2	ANEMOMETER, TYPE - DIGITAL, MAKE - EYTECH, MODEL - AN300.	Numbers	0.0	0.0
3	WTTD CLAMP, MOC - MS, DIA - 12 - 14 MM	Numbers	0.0	0.0
4	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 6, Electrical grade.	Pairs	15.0	15.0
5	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	15.0	15.0
6	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 9, Electrical grade.	Pairs	12.0	12.0
7	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 10, Electrical grade.	Pairs	12.0	12.0
8	GUM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 7 (full length)	Pairs	20.0	20.0
9	ROCK CHAIR, MATERIAL - Nylon Polyester, SIZE - Width - 44 mm, Capacity - 250N.	Numbers	10.0	10.0
10	GUM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 8 (full length)	Pairs	20.0	20.0
11	GUM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 9 (full length)	Pairs	25.0	25.0
12	SAFETY HELMET, MATERIAL - HDPE, TYPE - Ratchet, COLOR - White, With chin strap, with embossed S&T Logo	Numbers	30.0	30.0

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13	SAFETY SHOES; APPLICATION : For workmen; MATERIAL : Leather; TYPE : Male; PATTERN : With steel toe; TYPE OF SOLE : Polyurethane sole; SIZE : 7; Electrical grade:	Pairs	24.0	33.0
14	ROPE GRAB FALL ARRESTER; SIZE : 10 m long anchorage (inline)	Numbers	3.0	3.0
15	SAFETY SHOES; APPLICATION : For workmen; MATERIAL : Leather; TYPE : Male; PATTERN : With steel toe; TYPE OF SOLE : Direct Injected PVC sole; SIZE : 6; Electrical grade:	Pairs	20.0	20.0
16	SHOULDER PAD; MATERIAL : Leather;	Numbers	0.0	0.0
17	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; COLOUR : Yellow; OTHER SPECIFICATIONS : With chin strap;	Numbers	15.0	10.0
18	SAFETY HELMET; MATERIAL : HDPE; TYPE : Ratchet; COLOUR : Blue; OTHER SPECIFICATIONS : With chin strap;	Numbers	12.0	12.0
19	LEATHER HAND GLOVES; APPLICATION : Welding work; SIZE : 14 - long; OTHER SPECIFICATIONS : With inside cotton lining;	Pairs	60.0	34.0
20	SAFETY HELMET; MATERIAL : HDPE; TYPE : Nape; COLOUR : Yellow; With chin strap; with embossed IST logo;	Numbers	15.0	15.0
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 362 - 2 - 1995 - made of mild steel with galvanized coating; / stainless steel Gravity locking mechanism 34 mm coring;	Numbers	0.0	0.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH : 25 m; CE certified and conforming to EN 360:2002 casing made up of high impact strength polymer cones with galvanized steel wire rope of dia. 4.5mm; provided with swivel snap hook anchorage eye with swivel action;	Numbers	0.0	0.0
23	SAFETY HELMET REFILL; TYPE : Ratchet; OTHER SPECIFICATIONS : With nylon chin strap;	Numbers	6.0	6.0
24	APRON; APPLICATION : Welding work; MATERIAL : Leather; OTHER SPECIFICATIONS : With full leather;	Numbers	10.0	10.0

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 E-mail: cpe@cpet.com.cn





25	SAFETY SHOES, APPLICATION : For workers; MATERIAL : PVC, PATTERN : With steel toe; TYPE OF SOLE : Direct injected PVC sole, SIZE : 8;	Pairs	5.0	5.0
26	REFLECTIVE JACKET, MATERIAL : Polyester (30 GSM); COLOUR : Orange; Reflective tape: micro prismatic reflective tapes 5-cm. wide total length-232 cm. reflective I&T logo with I&T (EE-6 TRAFIC MARSHAL) logo at front and back opening type; front	Sets	120.0	120.0
27	SAFETY SHOES, APPLICATION : For workers; MATERIAL : PVC, PATTERN : With steel toe; TYPE OF SOLE : Direct injected PVC sole, SIZE : 8;	Pairs	6.0	6.0
28	FULL BODY SAFETY HARNESS; MATERIAL : Nylon; WITH DOUBLE LANTARD SCAFFOLDING ROCK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	0.0	0.0
29	SAFETY SHOES, APPLICATION : For staff; MATERIAL : PU, PATTERN : With steel toe; TYPE OF SOLE : Direct injected single density polyurethane sole, SIZE : 6;	Pairs	6.0	6.0
30	ANCHORAGE LINE, MATERIAL : POLYAMIDE ROPE; LENGTH : 66 m; SIZE : 14 mm DIA;	Numbers	0.0	0.0
31	SAFETY HESMET, MATERIAL : PVC, TYPE : Load carrying; COLOUR : Yellow; With chin strap	Numbers	0.0	0.0
32	REFLECTIVE JACKET, MATERIAL : Polyester (30 GSM); COLOUR : Green; 3M 3000 bead reflective tape 5 cm wide Total length-232 cm. reflective I&T logo at front and back opening type; front and back with 2-3 large Velcro;	Sets	30.0	30.0
33	COTTON HAND GLOVES; GRADE : Grade : 5; SIZE : 10 long; WEIGHT : 8G; With latex coating on one side;	Pairs	100.0	100.0
34	RUBBER HAND GLOVES; APPLICATION : Electrical work; GRADE : 33 KV; SIZE : 14 long; Acid/alkali proof;	Pairs	25.0	
35	NOSE MASK; MATERIAL : Cotton; TYPE : Reusable;	Numbers	5.0	

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36	SAFETY SHOES, MATERIAL - PU, TYPE - Male; PATTERN - With lace toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	11.0	11.0
37	SAFETY SHOES, MATERIAL - PU, TYPE - Male; PATTERN - With lace toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	15.0	15.0
38	SAFETY SHOES, MATERIAL - PU, TYPE - Male; PATTERN - With lace toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	15.0	15.0
39	SAFETY HELMET, MATERIAL - HDPE, TYPE - Nape, COLOUR - Green, With chin strap.	Numbers	15.0	15.0
40	RETRACTABLE FALL ARRESTER BUOY, MATERIAL - Polyurethane, LENGTH - 10 m.	Numbers	1.0	1.0
41	REFLECTIVE JACKET, MATERIAL - Polyester (60 GSM), COLOUR - Orange Red, SIZE - Medium (M), With full sleeves.	Numbers	11.0	11.0
42	SAFETY SHOES, MATERIAL - PU, TYPE - Male; PATTERN - With lace toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	10.0	10.0
43	SAFETY HELMET, MATERIAL - HDPE, TYPE - Nape, COLOUR - Red, With chin strap.	Numbers	5.0	5.0
44	SAFETY HELMET, MATERIAL - HDPE, TYPE - Nape, COLOUR - Red, With chin strap.	Numbers	5.0	5.0
45	SURGICAL ITEMS, Reusable Washable Rubber Gloves	Pairs	12.0	12.0
46	WITCHES SNAKE BITE MEDICINE KIT	Numbers	0.0	0.0
47	FIRE EXTINGUISHER AND TYPE, CAPACITY - 4 kg.	Numbers	10.0	10.0
48	FIRE BUCKETS, CAPACITY - 9 L, NUMBERS - 5, OTHER SPECIFICATIONS - With stand & Cartery	Numbers	9.0	9.0
49	MEDICINE, HAND SANITIZER 500ML 5 LTR	Numbers	2.0	2.0
50	CO2 GAS TYPE FIRE EXTINGUISHER, CAPACITY - 5 kg, (OTHER SPECIFICATIONS - Wall mounted With stand)	Numbers	5.0	5.0
51	CO2 GAS TYPE FIRE EXTINGUISHER, TYPE - CO2, CAPACITY - 8.5 kg, OTHER SPECIFICATIONS - Wall mounted.	Numbers	5.0	5.0
52	FIRE BUCKET STAND, TYPE - T type.	Numbers	2.0	2.0

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.
 2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-2594-2595-2596-2597-2598-2599-2600-2601-2602-2603-2604-2605-2606-2607-2608-2609-2610-2611-2612-2613-2614-2615-2616-2617-2618-2619-2620-2621-2622-2623-2624-2625-2626-2627-2628-2629-2630-2631-2632-2633-2634-2635-2636-2637-2638-2639-2640-2641-2642-2643-2644-2645-2646-2647-2648-2649-2650-2651-2652-2653-2654-2655-2656-2657-2658-2659-2660-2661-2662-2663-2664-2665-2666-2667-2668-2669-2670-2671-2672-2673-2674-2675-2676-2677-2678-2679-2680-2681-2682-2683-2684-2685-2686-2687-2688-2689-2690-2691-2692-2693-2694-2695-2696-2697-2698-2699-2700-2701-2702-2703-2704-2705-2706-2707-2708-2709-2710-2711-2712-2713-2714-2715-2716-2717-2718-2719-2720-2721-2722-2723-2724-2725-2726-2727-2728-2729-2730-2731-2732-2733-2734-2735-2736-2737-2738-2739-2740-2741-2742-2743-2744-2745-2746-2747-2748-2749-2750-2751-2752-2753-2754-2755-2756-2757-2758-2759-2760-2761-2762-2763-2764-2765-2766-2767-2768-2769-2770-2771-2772-2773-2774-2775-2776-2777-2778-2779-2780-2781-2782-2783-2784-2785-2786-2787-2788-2789-2790-2791-2792-2793-2794-2795-2796-2797-2798-2799-2800-2801-2802-2803-2804-2805-2806-2807-2808-2809-2810-2811-2812-2813-2814-2815-2816-2817-2818-2819-2820-2821-2822-2823-2824-2825-2826-2827-2828-2829-2830-2831-2832-2833-2834-2835-2836-2837-2838-2839-2840-2841-2842-2843-2844-2845-2846-2847-2848-2849-2850-2851-2852-2853-2854-2855-2856-2857-2858-2859-2860-2861-2862-2863-2864-2865-2866-2867-2868-2869-2870-2871-2872-2873-2874-2875-2876-2877-2878-2879-2880-2881-2882-2883-2884-2885-2886-2887-2888-2889-2890-2891-2892-2893-2894-2895-2896-2897-2898-2899-2900-2901-2902-2903-2904-2905-2906-2907-2908-2909-2910-2911-2912-2913-2914-2915-2916-2917-2918-2919-2920-2921-2922-2923-2924-2925-2926-2927-2928-2929-2930-2931-2932-2933-2934-2935-2936-2937-2938-2939-2940-2941-2942-2943-2944-2945-2946-2947-2948-2949-2950-2951-2952-2953-2954-2955-2956-2957-2958-2959-2960-2961-2962-2963-2964-2965-2966-2967-2968-2969-2970-2971-2972-2973-2974-2975-2976-2977-2978-2979-2980-2981-2982-2983-2984-2985-2986-2987-2988-2989-2990-2991-2992-2993-2994-2995-2996-2997-2998-2999-3000-3001-3002-3003-3004-3005-3006-3007-3008-3009-3010-3011-3012-3013-3014-3015-3016-3017-3018-3019-3020-3021-3022-3023-3024-3025-3026-3027-3028-3029-3030-3031-3032-3033-3034-3035-3036-3037-3038-3039-3040-3041-3042-3043-3044-3045-3046-3047-3048-3049-3050-3051-3052-3053-3054-3055-3056-3057-3058-3059-3060-3061-3062-3063-3064-3065-3066-3067-3068-3069-3070-3071-3072-3073-3074-3075-3076-3077-3078-3079-3080-3081-3082-3083-3084-3085-3086-3087-3088-3089-3090-3091-3092-3093-3094-3095-3096-3097-3098-3099-3100-3101-3102-3103-3104-3105-3106-3107-3108-3109-3110-3111-3112-3113-3114-3115-3116-3117-3118-3119-3120-3121-3122-3123-3124-3125-3126-3127-3128-3129-3130-3131-3132-3133-3134-3135-3136-3137-3138-3139-3140-3141-3142-3143-3144-3145-3146-3147-3148-3149-3150-3151-3152-3153-3154-3155-3156-3157-3158-3159-3160-3161-3162-3163-3164-3165-3166-3167-3168-3169-3170-3171-3172-3173-3174-3175-3176-3177-3178-3179-3180-3181-3182-3183-3184-3185-3186-3187-3188-3189-3190-3191-3192-3193-3194-3195-3196-3197-3198-3199-3200-3201-3202-3203-3204-3205-3206-3207-3208-3209-3210-3211-3212-3213-3214-3215-3216-3217-3218-3219-3220-3221-3222-3223-3224-3225-3226-3227-3228-3229-3230-3231-3232-3233-3234-3235-3236-3237-3238-3239-3240-3241-3242-3243-3244-3245-3246-3247-3248-3249-3250-3251-3252-3253-3254-3255-3256-3257-3258-3259-3260-3261-3262-3263-3264-3265-3266-3267-3268-3269-3270-3271-3272-3273-3274-3275-3276-3277-3278-3279-3280-3281-3282-3283-3284-3285-3286-3287-3288-3289-3290-3291-3292-3293-3294-3295-3296-3297-3298-3299-3300-3301-3302-3303-3304-3305-3306-3307-3308-3309-3310-3311-3312-3313-3314-3315-3316-3317-3318-3319-3320-3321-3322-3323-3324-3325-3326-3327-3328-3329-3330-3331-3332-3333-3334-3335-3336-3337-3338-3339-3340-3341-3342-3343-3344-3345-3346-3347-3348-3349-3350-3351-3352-3353-3354-3355-3356-3357-3358-3359-3360-3361-3362-3363-3364-3365-3366-3367-3368-3369-3370-3371-3372-3373-3374-3375-3376-3377-3378-3379-3380-3381-3382-3383-3384-3385-3386-3387-3388-3389-3390-3391-3392-3393-3394-3395-3396-3397-3398-3399-3400-3401-3402-3403-3404-3405-3406-3407-3408-3409-3410-3411-3412-3413-3414-3415-3416-3417-3418-3419-3420-3421-3422-3423-3424-3425-3426-3427-3428-3429-3430-3431-3432-3433-3434-3435-3436-3437-3438-3439-3440-3441-3442-3443-3444-3445-3446-3447-3448-3449-3450-3451-3452-3453-3454-3455-3456-3457-3458-3459-3460-3461-3462-3463-3464-3465-3466-3467-3468-3469-3470-3471-3472-3473-3474-3475-3476-3477-3478-3479-3480-3481-3482-3483-3484-3485-3486-3487-3488-3489-3490-3491-3492-3493-3494-3495-3496-3497-3498-3499-3500-3501-3502-3503-3504-3505-3506-3507-3508-3509-3510-3511-3512-3513-3514-3515-3516-3517-3518-3519-3520-3521-3522-3523-3524-3525-3526-3527-3528-3529-3530-3531-3532-3533-3534-3535-3536-3537-3538-3539-3540-3541-3542-3543-3544-3545-3546-3547-3548-3549-3550-3551-3552-3553-3554-3555-3556-3557-3558-3559-3560-3561-3562-3563-3564-3565-3566-3567-3568-3569-3570-3571-3572-3573-3574-3575-3576-3577-3578-3579-3580-3581-3582-3583-3584-3585-3586-3587-3588-3589-3590-3591-3592-3593-3594-3595-3596-3597-3598-3599-3600-3601-3602-3603-3604-3605-3606-3607-3608-3609-3610-3611-3612-3613-3614-3615-3616-3617-3618-3619-3620-3621-3622-3623-3624-3625-3626-3627-3628-3629-3630-3631-3632-3633-3634-3635-3636-3637-3638-3639-3640-3641-3642-3643-3644-3645-3646-3647-3648-3649-3650-3651-3652-3653-3654-3655-3656-3657-3658-3659-3660-3661-3662-3663-3664-3665-3666-3667-3668-3669-3670-3671-3672-3673-3674-3675-3676-3677-3678-3679-3680-3681-3682-3683-3684-3685-3686-3687-3688-3689-3690-3691-3692-3693-3694-3695-3696-3697-3698-3699-3700-3701-3702-3703-3704-3705-3706-3707-3708-3709-3710-3711-3712-3713-3714-3715-3716-3717-3718-3719-3720-3721-3722-3723-3724-3725-3726-3727-3728-3729-3730-3731-3732-3733-3734-3735-3736-3737-3738-3739-3740-3741-3742-3743-3744-3745-3746-3747-3748-3749-3750-3751-3752-3753-3754-3755-3756-3757-3758-3759-3760-3761-3762-3763-3764-3765-3766-3767-3768-3769-3770-3771-3772-3773-3774-3775-3776-3777-3778-3779-3780-3781-3782-3783-3784-3785-3786-3787-3788-3789-3790-3791-3792-3793-3794-3795-3796-3797-3798-3799-3800-3801-3802-3803-3804-3805-3806-3807-3808-3809-3810-3811-3812-3813-3814-3815-3816-3817-3818-3819-3820-3821-3822-3823-3824-3825-3826-3827-3828-3829-3830-3831-3832-3833-3834-3835-3836-3837-3838-3839-3840-3841-3842-3843-3844-3845-3846-3847-3848-3849-3850-3851-3852-3853-3854-3855-3856-3857-3858-3859-3860-3861-3862-3863-3864-3865-3866-3867-3868-3869-3870-3871-3872-3873-3874-3875-3876-3877-3878-3879-3880-3881-3882-3883-3884-3885-3886-3887-3888-3889-3890-3891-3892-3893-3894-3895-3896-3897-3898-3899-3900-3901-3902-3903-3904-3905-3906-3907-3908-3909-3910-3911-3912-3913-3914-3915-3916-3917-3918-3919-3920-3921-3922-3923-3924-3925-3926-3927-3928-3929-3930-3931-3932-3933-3934-3935-3936-3937-3938-3939-3940-3941-3942-3943-3944-3945-3946-3947-3948-3949-3950-3951-3952-3953-3954-3955-3956-3957-3958-3959-3960-3961-3962-3963-3964-3965-3966-3967-3968-3969-3970-3971-3972-3973-3974-3975-3976-3977-3978-3979-3980-3981-3982-3983-3984-3985-3986-3987-3988-3989-3990-3991-3992-3993-3994-3995-3996-3997-3998-3999-4000-4001-4002-4003-4004-4005-4006-4007-4008-4009-4010-4011-4012-4013-4014-4015-4016-4017-4018-4019-4020-4021-4022-4023-4024-4025-4026-4027-4028-4029-4030-4031-4032-4033-4034-4035-4036-4037-4038-4039-4040-4041-4042-4043-4044-4045-4046-4047-4048-4049-4050-4051-4052-4053-4054-4055-4056-4057-4058-4059-4060-4061-4062-4063-4064-4065-4066-4067-4068-4069-4070-4071-4072-4073-4074-4075-4076-4077-4078-4079-4080-4081-4082-4083-4084-4085-4086-4087-4088-4089-4090-4091-4092-4093-4094-4095-4096-4097-4098-4099-4100-4101-4102-4103-4104-4105-4106-4107-4108-4109-4110-4111-4112-4113-4114-4115-4116-4117-4118-4119-4120-4121-4122-4123-4124-4125-4126-4127-4128-4129-4130-4131-4132-4133-4134-4135-4136-4137-4138-4139-4140-4141-4142-4143-4144-4145-4146-4147-4148-4149-4150-4151-4152-4153-4154-4155-4156-4157-4158-4159-4160-4161-4162-4163-4164-4165-4166-4167-4168-4169-4170-4171-4172-4173-4174-4175-4176-4177-4178-4179-4180-4181-4182-4183-4184-4185-4186-4187-4188-4189-4190-4191-4192-4193-4194-4195-4196-4197-4198-4199-4200-4201-4202-4203-4204-4205-4206-4207-4208-4209-4210-4211-4212-4213-4214-4215-4216-4217-4218-4219-4220-4221-4222-4223-4224-4225-4226-4227-4228-4229-423



54	SAFETY BARRICADE TAPE; MATERIAL – LDPE; TYPE – Reflective; COLOUR – Red & white stripes; WIDTH – 75 mm; THICKNESS – 30 microns; OTHER SPECIFICATIONS – 500 m roll.	Numbers	15.0	10.0
55	TESTER; TYPE – Helmet mountable induction type.	Numbers	10.0	10.0
56	Safety Mannequin; TYPE – FULL BODY; OTHER SPECIFICATIONS – With park.	Numbers	2.0	2.0
57	SAFETY BARRICADE TAPE; MATERIAL – LDPE; TYPE – Reflective; COLOUR – Red & white stripes; WIDTH – 75 mm; THICKNESS – 30 microns; OTHER SPECIFICATIONS – 100 m roll.	Numbers	30.0	10.0
58	DISCHARGE ROD; TYPE – Telescopic; DISCHARGE VOLTAGE – 33 kV; WIRE SIZE – 10 mm ² ; WIRE LENGTH – 23 m.	Numbers	2.0	2.0
59	TESTER; TYPE – Helmet mountable induction type.	Numbers	10.0	10.0
60	TESTER; TYPE – Pen Type.	Numbers	2.0	2.0
61	DISCHARGE ROD; TYPE – Telescopic; DISCHARGE VOLTAGE – 23 kV; WIRE SIZE – 10 mm ² ; WIRE LENGTH – 11 m.	Numbers	2.0	2.0
62	TRAFFIC SAFETY CONE; MATERIAL – LDPE; SIZE – 750 mm height; With heavy rubber base.	Numbers	20.0	20.0
64	TOOL LIFTING BAG; 25 kg.	Numbers	2.0	2.0
65	GRABBER; TYPE – curved cover wooden spine supports.	Numbers	0.0	0.0
66	SAFETY BARRICADE TAPE; MATERIAL – PVC; TYPE – Reflective; COLOUR – Red & white stripes; WIDTH – 5 ; THICKNESS – 100 microns.	Numbers	10.0	30.0
67	TRAFFIC SAFETY CONE; MATERIAL – LDPE; SIZE – 750 mm height; With heavy rubber base.	Numbers	15.0	15.0
68	MEDICAL EQUIPMENT AS DESCRIBED FURTHER, Ambu Bag	Numbers	0.0	
69	EMERGENCY DRIVING SPIKE; MATERIAL – GI; SUITABLE FOR – 16 mm dia. rod.	Numbers	0.0	



CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD.
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www.chepc.com.cn

 国家电网 STATE GRID 中国电力技术装备有限公司 CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.				
70	BINOULAR MAKE : Bushnell MODEL : 131150	Numbers	02	02
71	Ear Plug Model : 3M Ear Plug	Numbers	3000	3000
				
CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD. Head Office Building, No. 8, Beixing Road, Zhengzhou, Henan, China 450001, China Tel: 86-371-63636168 Fax: 86-371-63636169 Website: www.chepc.com				

**PPE Inventory**

Design, Supply, Installation, Testing and Commissioning of 400/230/132 kV GIS Substation at:
Purbachal on turnkey basis (Package-6)

Date: 30.06.2023

Sl. No	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE – SHOULDER, MAKE – Altek, MODEL – AM-2SH 9A ;	Numbers	2.0	2.0
2	ANEMOMETER, TYPE – DIGITAL, MAKE – FITECH, MODEL – AN300 ;	Numbers	0.0	0.0
3	RITTO CLAMP, NOC – MS, DIA – 12 – 18 MM;	Numbers	0.0	0.0
4	SAFETY SHOES, APPLICATION – For staff; MATERIAL – Leather, TYPE – Male; PATTERN – With steel toe; TYPE OF SOLE – Polyurethane sole; SIZE – 8; Electrical grade;	Pairs	11.0	11.0
5	SAFETY SHOES, APPLICATION – For staff; MATERIAL – Leather, TYPE – Male; PATTERN – With steel toe; TYPE OF SOLE – Polyurethane sole; SIZE – 8; Electrical grade;	Pairs	11.0	11.0
6	SAFETY SHOES, APPLICATION – For staff; MATERIAL – Leather, TYPE – Male; PATTERN – With steel toe; TYPE OF SOLE – Polyurethane sole; SIZE – 9; Electrical grade;	Pairs	11.0	11.0
7	SAFETY SHOES, APPLICATION – For staff; MATERIAL – Leather, TYPE – Male; PATTERN – With steel toe; TYPE OF SOLE – Polyurethane sole; SIZE – 10; Electrical grade;	Pairs	11.0	11.0
8	GUM BOOTS, MATERIAL – PVC, PATTERN – With steel toe; SIZE – 7 (Full length);	Pairs	20.0	20.0
9	ROCK CHAIR, MATERIAL – Nylon Polymeric; SIZE – Width – 44 mm; Capacity – 25kN;	Numbers	0.0	0.0
10	GUM BOOTS, MATERIAL – PVC, PATTERN – With steel toe; SIZE – 8 (Full length);	Pairs	20.0	20.0
11	GUM BOOTS, MATERIAL – PVC, PATTERN – With steel toe; SIZE – 9 (Full length);	Pairs	20.0	20.0
12	SAFETY HELMET, MATERIAL – HDPE, TYPE – Ratchet; COLOUR – White; With chin strap; with embossed L&T Logo	Numbers	30.0	30.0

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12	SAFETY SHOES, APPLICATION - For workers; MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 7, Electrical grade.	Pairs	14.0	12.0
14	ROPE GRAB FALL ARRESTER, SIZE - 10 m long anchorage lifeline.	Numbers	3.0	2.0
15	SAFETY SHOES, APPLICATION - For workers; MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Direct inserted PVC sole, SIZE - 6, Electrical grade.	Pairs	20.0	20.0
16	SHOULDER PAD, MATERIAL - Leather.	Numbers	0.0	0.0
17	SAFETY HELMET, MATERIAL - HDPE, TYPE - Ratchet, COLOUR - Yellow, OTHER SPECIFICATIONS - With chin strap.	Numbers	15.0	10.0
18	SAFETY HELMET, MATERIAL - HDPE, TYPE - Ratchet, COLOUR - Blue, OTHER SPECIFICATIONS - With chin strap.	Numbers	12.0	12.0
19	LEATHER HAND GLOVES, APPLICATION - Welding work, SIZE - 14 - long, OTHER SPECIFICATIONS - With inside cotton lining.	Pairs	60.0	54.0
20	SAFETY HELMET, MATERIAL - HDPE, TYPE - Ratchet, COLOUR - Yellow, With chin strap; with embossed L&T Logo.	Numbers	15.0	15.0
21	ROPE GRAB FALL ARRESTER, CE certified conforming to EN 362 - 2 - 1995 - made of mild steel with galvanized coating / stainless steel gravity locking mechanism 34 mm - clamping.	Numbers	0.0	0.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH - 15 m; CE certified and conforming to EN 360:2002 coating made up of high impact strength polymer comes with galvanized steel wire rope of dia. 6.5mm; provided with swivel snap hook anchorage eye with ratchet action.	Numbers	0.0	0.0
23	SAFETY HELMET REFINI, TYPE - Ratchet; OTHER SPECIFICATIONS - With nylon chin strap.	Numbers	6.0	6.0
24	AWRON, APPLICATION - Welding work; MATERIAL - Leather; OTHER SPECIFICATIONS - With full sleeves.	Numbers	10.0	10.0

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25	SAFETY SHOES; APPLICATION - For workmen; MATERIAL - PVC; PATTERN - With steel toe; TYPE OF SOLE - Direct injected PVC sole; SIZE - 8.	Pairs	5.0	5.0
26	REFLECTIVE JACKET; MATERIAL - Polyester (180 GSM); COLOUR - Orange; Reflective tape: micro prismatic reflective tapes 5 cm wide total length 200 cm; reflective L&T logo with L&T LIFE & TRAFFIC MARSHALL logo at front and back opening type: front	Sets	120.0	120.0
27	SAFETY SHOES; APPLICATION - For workmen; MATERIAL - PVC; PATTERN - With steel toe; TYPE OF SOLE - Direct injected PVC sole; SIZE - 8.	Pairs	6.0	6.0
28	FULL BODY SAFETY HARNESS; MATERIAL - Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT	Sets	0.0	0.0
29	SAFETY SHOES; APPLICATION - For staff; MATERIAL - PU; PATTERN - With steel toe; TYPE OF SOLE - Direct injected single density polyurethane sole; SIZE - 8.	Pairs	6.0	6.0
30	ANCHORAGE LINE; MATERIAL - POLYAMIDE ROPE; LENGTH - 30 m; SIZE - 14 mm (5A)	Numbers	0.0	0.0
31	SAFETY HELMET; MATERIAL - PVC; TYPE - load carrying; COLOUR - yellow; With chin strap	Numbers	0.0	0.0
32	REFLECTIVE JACKET; MATERIAL - Polyester (130 GSM); COLOUR - Green; 1M Glass Bead reflective tape 5 cm wide total length -232 cm; reflective L&T logo at front and back opening type: front vest with 3-3 large VIRCH	Sets	30.0	30.0
33	COTTON HAND GLOVES; GRADE - Green - 6; SIZE - 10 long; WEIGHT - 80; With latex coating on one side	Pairs	100.0	100.0
34	RUBBER HAND GLOVES; APPLICATION - Electrical work; GRADE - 33 VV; SIZE - 14 long; Acid/alkali proof	Pairs	25.0	25.0
35	NOSE MASK; MATERIAL - Cotton; TYPE - Reversible	Numbers	5.0	5.0

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36	SAFETY SHOES; MATERIAL - PU; TYPE - Male; PATTERN - with flex toe; TYPE OF SOLE - Polyurethane sole; SIZE - 8; Electrical grade;	Pairs	12.0	12.0
37	SAFETY SHOES; MATERIAL - PU; TYPE - Male; PATTERN - with flex toe; TYPE OF SOLE - Polyurethane sole; SIZE - 9; Electrical grade;	Pairs	15.0	15.0
38	SAFETY SHOES; MATERIAL - PU; TYPE - Male; PATTERN - with flex toe; TYPE OF SOLE - Polyurethane sole; SIZE - 6; Electrical grade;	Pairs	15.0	15.0
39	SAFETY HELMET; MATERIAL - HDPE; TYPE - Nape; COLOUR - Green; With chin strap;	Numbers	15.0	15.0
40	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL - Polymer; LENGTH - 15 m;	Numbers	0.0	0.0
41	REFLECTIVE JACKET; MATERIAL - Polyester (80-100%); COLOUR - Orange Red; SIZE - Medium (M); With full sleeves;	Numbers	12.0	12.0
42	SAFETY SHOES; MATERIAL - PU; TYPE - Male; PATTERN - with flex toe; TYPE OF SOLE - Polyurethane sole; SIZE - 8; Electrical grade;	Pairs	10.0	10.0
43	SAFETY HELMET; MATERIAL - HDPE; TYPE - Nape; COLOUR - Red; With chin strap;	Numbers	5.0	5.0
44	SAFETY HELMET; MATERIAL - HDPE; TYPE - Nape; COLOUR - Red; With chin strap;	Numbers	5.0	5.0
45	SURGICAL ITSM; Reusable Disposable Rubber Gloves	Pairs	12.0	12.0
46	MEDICINES SNARE BITE MEDICINE KIT	Numbers	0.0	0.0
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY - 4 kg;	Numbers	10.0	10.0
48	FIRE BUCKETS; CAPACITY - 9 L; NUMBERS - 1; OTHER SPECIFICATIONS - With Stand & Carriers;	Numbers	9.0	9.0
49	MEDICINES; HAND SANITIZER REFILL 5 LTR	Numbers	2.0	2.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY - 5 kg; OTHER SPECIFICATIONS - wall mounted With stand;	Numbers	5.0	5.0
51	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE - CO2; CAPACITY - 6.5 kg; OTHER SPECIFICATIONS - wall mounted;	Numbers	5.0	5.0
52	FIRE BUCKET STAND; TYPE - T type;	Numbers	2.0	2.0



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54	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns, OTHER SPECIFICATIONS - 500 m roll.	Numbers	15.0	15.0
55	TESTER, TYPE - Helmet mountable inductor type.	Numbers	11.0	11.0
56	Safety Mannequin, TYPE - FULL BODY, OTHER SPECIFICATIONS - With park.	Numbers	2.0	2.0
57	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns, OTHER SPECIFICATIONS - 500 m roll.	Numbers	11.0	11.0
58	DISCHARGE ROD, TYPE - Telescopic, DISCHARGE VOLTAGE - 33 kV, WIRE SIZE - 12 mm ² , WIRE LENGTH - 21 m.	Numbers	2.0	2.0
59	TESTER, TYPE - Helmet mountable inductor type.	Numbers	11.0	11.0
60	TESTER, TYPE - Pen Type.	Numbers	2.0	2.0
61	DISCHARGE ROD, TYPE - Telescopic, DISCHARGE VOLTAGE - 21 kV, WIRE SIZE - 12 mm ² , WIRE LENGTH - 11 m.	Numbers	2.0	2.0
62	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, With heavy rubber base.	Numbers	20.0	20.0
64	TOOL LIFTING BAG, 25 kg.	Numbers	2.0	2.0
65	STRETCHER, TYPE - carries cover, wooden spine support.	Numbers	0.0	0.0
66	SAFETY BARRICADE TAPE, MATERIAL - PVC, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 3, THICKNESS - 100 microns.	Numbers	10.0	10.0
67	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, With heavy rubber base.	Numbers	15.0	15.0
68	MEDICAL EQUIPMENT AS DESCRIBED FURTHER, Ambu Bag	Numbers	0.0	0.0
69	EARTH ROD DRIVING SPIRE, MATERIAL - GI, SUITABLE FOR - 16 mm dia. rod.	Numbers	0.0	0.0

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Package 7

PPE Inventory				
Project Name: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS Substation at Rupsha and 132/33 kV GIS Substations at Phulsi, Morichampur, Maheshpur, Meherpur on turnkey basis (Package 7)				
Package 7		Date :-	1/7/2025	
Sl No/ DES PPE Item		Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE, TYPE :- SHOULDER, MAKE :- ARJUN, MODEL :- XM-23H PA.	Numbers	10.0	10.0
2	IMMERSION METER, TYPE :- DIGITAL, MAKE :- CATECH, MODEL :- AN500	Numbers	0.0	0.0
3	WIRE CLAMP, MDC :- MS, DIA :- 22 - 34 MM	Numbers	0.0	0.0
4	BAR BUD, Name:	Numbers	10.0	10.0
5	SAFETY SHOES, APPLICATION :- For staff, MATERIAL :- Leather, TYPE :- Male, PATTERN :- With steel toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 8, Electrical grade.	Pairs	0.0	10.0
6	SAFETY SHOES, APPLICATION :- For staff, MATERIAL :- Leather, TYPE :- Male, PATTERN :- With steel toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 8, Electrical grade.	Pairs	50.0	1.0
7	SAFETY SHOES, APPLICATION :- For staff, MATERIAL :- Leather, TYPE :- Male, PATTERN :- With steel toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 9, Electrical grade.	Pairs	100.0	50.0
8	SAFETY SHOES, APPLICATION :- For staff, MATERIAL :- Leather, TYPE :- Male, PATTERN :- With steel toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 10, Electrical grade.	Pairs	200.0	25.0
9	GUM BOOTS, MATERIAL :- PVC, PATTERN :- With steel toe, SIZE :- 7 (full length)	Pairs	0.0	0.0
10	ROCK CHAIR, MATERIAL :- Nylon Polyester, SIZE :- Width - 44 mm, Capacity - 135kg	Numbers	0.0	0.0
11	GUM BOOTS, MATERIAL :- PVC, PATTERN :- With steel toe, SIZE :- 8 (full length)	Pairs	50.0	1.0
12	GUM BOOTS, MATERIAL :- PVC, PATTERN :- With steel toe, SIZE :- 9 (full length)	Pairs	40.0	10.0
13	SAFETY HELMET, MATERIAL :- HDPE, TYPE :- Ratchet, COLOUR :- White, With chin strap with embossed LGT Logo	Numbers	200.0	10.0
14	SAFETY SHOES, APPLICATION :- For workers, MATERIAL :- leather, TYPE :- Male, PATTERN :- With steel toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 7, Electrical grade.	Pairs	0.0	0.0
15	ROPE GRAB FALL ARRESTER, SIZE :- 32 m long, Anchorage frame:	Numbers	10.0	1.0



16	SAFETY SHOES, APPLICATION: - For workmen; MATERIAL: - Leather; TYPE: - Male; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8; Electrical grade	Pairs	0.0	0.0
17	SHOULDER PAD; MATERIAL: - Leather	Numbers	0.0	0.0
18	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - Asper; COLOUR: - Yellow; OTHER SPECIFICATIONS: - with chin strap	Numbers	200.0	80.0
19	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - Reclined; COLOUR: - Blue; OTHER SPECIFICATIONS: - With chin strap	Numbers	10.0	3.0
20	LEATHER HAND GLOVES; APPLICATION: - Welding work; SIZE: - 14" long; OTHER SPECIFICATIONS: - With inside cotton lining	Pairs	100.0	30.0
21	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - Asper; COLOUR: - Yellow; With chin strap; with embossed L&T logo	Numbers	30.0	0.0
22	ROPE-GRAB FALL ARRESTER; Of certified conforming to BS 1181-2-2003 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm bearing	Numbers	0.0	0.0
23	RETRACTABLE FALL ARRESTER BLOCK LENGTH: - 10 m; Of certified and conforming to BS 3603:2003 Being made up of high impact strength polymer coated with galvanized steel wire rope of dia. 4.5mm; provided with internal snap hook anchorage and with swivel action	Numbers	0.0	0.0
24	SAFETY HELMET REPSL TYPE: - Reclined; OTHER SPECIFICATIONS: - With nylon chin strap	Numbers	N/A	
25	APRON; APPLICATION: - Welding work; MATERIAL: - Leather; OTHER SPECIFICATIONS: - with full sleeves	Numbers	10.0	0.0
26	SAFETY SHOES; APPLICATION: - For workmen; MATERIAL: - PVC; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8	Pairs	0.0	0.0
27	REFLECTIVE JACKET; MATERIAL: - Polyester 300 GSM; COLOUR: - Orange; Reflective tape: mini prismatic reflective Make 3 cm wide total length- 260 cm, reflective L&T logo with L&T LIFE & TRAFFIC WARNING logo at front and back opening type: front	Sets	100.0	30.0
28	SAFETY SHOES; APPLICATION: - For workmen; MATERIAL: - PVC; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8	Pairs	0.0	0.0
29	FULL BODY SAFETY HARNES; MATERIAL: - Nylon; WITH DOUBLE LANYARD SCARFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH 100kN	Sets	10.0	0.0



30	SAFETY SHOES, APPLICATION - Fire safe; MATERIAL - PU; PATTERN - With steel toe; TYPE OF SOLE - Direct (Haired single density polyurethane sole); SIZE - 8	Pairs	0.0	0.0
31	ANCHORAGE LINE, MATERIAL - POLYARIDE ROPE; LENGTH - 66 m; SIZE - 14 mm Dia.	Numbers	0.0	0.0
32	SAFETY HELMET/MATERIAL - PVC TYPE - Load carrying; COLOUR - Yellow; With chin strap	Numbers	0.0	0.0
33	REFLECTIVE JACKET, MATERIAL - Polyester; COLOUR - Green; 1M Glass Bead reflective tape; 5 cm wide Total length - 232 cm; reflective L&T logo at front and back, opening type: front vest with 2-3 large Velcro	Sets	0.0	0.0
34	COTTON HAND GLOVES, GRADE - Grade - 1; SIZE - 32; long; WEIGHT - 80; With latex coating on one side	Pairs	250.0	30.0
35	RUBBER HAND GLOVES, APPLICATION - Electrical work; GRADE - 23 W; SIZE - 34; long; Acrylic latex (grip)	Pairs	25.0	3.0
36	NOSE MASK, MATERIAL - Cotton; TYPE - Reusable	Numbers	150.0	50.0
37	SAFETY SHOES, MATERIAL - PU; TYPE - Mule; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 8; Electrical grade	Pairs	0.0	0.0
38	SAFETY SHOES, MATERIAL - PU; TYPE - Mule; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 5; Electrical grade	Pairs	0.0	0.0
39	SAFETY SHOES, MATERIAL - PU; TYPE - Mule; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 9; Electrical grade	Pairs	0.0	0.0
40	SAFETY HELMET, MATERIAL - HDPE; TYPE - Basic; COLOUR - Green; With chin strap	Numbers	35.0	2.0
41	RETRACTABLE FALL ARRESTER BLOCK, MATERIAL - Polyester; LENGTH - 13 m	Numbers	0.0	0.0
42	REFLECTIVE JACKET, MATERIAL - Polyester; COLOUR - Orange Red; SIZE - Medium (M); With full sleeves	Numbers	35.0	2.0
43	SAFETY SHOES, MATERIAL - PU; TYPE - Mule; PATTERN - With steel toe; TYPE OF SOLE - Polyurethane sole; SIZE - 9; Electrical grade	Pairs	30.0	3.0
44	SAFETY HELMET, MATERIAL - HDPE; TYPE - Basic; COLOUR - Red; With chin strap	Numbers	0.0	0.0
45	SAFETY HELMET, MATERIAL - HDPE; TYPE - Basic; COLOUR - Red; With chin strap	Numbers	0.0	0.0
46	DISINFECTANT, Reusable Weymouth Rubber Gloves	Pairs	35.0	3.0
47	MEDICINES SNARE BITE MEDICINE KIT	Numbers	30.0	3.0
48	FIRE EXTINGUISHER ABC TYPE; CAPACITY - 4 kg	Numbers	30.0	4.0
49	FIRE BUCKETS, CAPACITY - 3 L; NUMBERS - 3; OTHER SPECIFICATIONS - With Stand & Canopy	Numbers	30.0	4.0
50	MEDICINES HAND SANITIZER PERFL 3 LTR	Numbers	25.0	1.0



51	CO2 GAS TYPE FIRE EXTINGUISHER, CAPACITY - 5 kg; OTHER SPECIFICATIONS - Wall mounted With stand.	Numbers	0.0	0.0
52	CO2 GAS TYPE FIRE EXTINGUISHER, TYPE - CO2, CAPACITY - 5.5 kg; OTHER SPECIFICATIONS - Wall mounted.	Numbers	30.0	0.0
53	FIRE BUCKET STAND, TYPE - T type.	Numbers	N/A	
54	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns; OTHER SPECIFICATIONS - 500 m roll.	Numbers	N/A	
55	TESTER, TYPE - Penmet mountable induction type.	Numbers	N/A	
56	Safety Manometer, TYPE - Full body; OTHER SPECIFICATIONS - With park.	Numbers	N/A	
57	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns; OTHER SPECIFICATIONS - 500 m roll.	Numbers	N/A	
58	DISCHARGE ROD, TYPE - Telescopical, DISCHARGE VOLTAGE - 33 kv; WIRE SIZE - 10 mm ² ; WIRE LENGTH - 15 m.	Numbers	N/A	
59	TESTER, TYPE - Penmet mountable induction type.	Numbers	N/A	
60	TESTER, TYPE - Pen Tube.	Numbers	N/A	
61	DISCHARGE ROD, TYPE - Telescopical, DISCHARGE VOLTAGE - 33 kv; WIRE SIZE - 10 mm ² ; WIRE LENGTH - 15 m.	Numbers	N/A	
62	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, with heavy rubber base.	Numbers	N/A	
63	TOOL, LIFTING BAG, 25 kg.	Numbers	N/A	
64	STRETCHER, TYPE - canvas cover wooden spine (4400H).	Numbers	N/A	
65	SAFETY BARRICADE TAPE, MATERIAL - PVC, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 8 ; THICKNESS - 100 microns.	Numbers	N/A	
66	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, with heavy rubber base.	Numbers	N/A	
67	MEDICAL EQUIPMENT AS DESCRIBED FURTHER, Ambu Bag.	Numbers	N/A	
68	EARTH ROD DRIVING SPKZ, MATERIAL - GL, SUITABLE ROD - 18 mm dia. rod.	Numbers	N/A	
69	BINOCULAR, MAKE - Buxton, MODEL - 111250.	Numbers	N/A	



PPE Inventory				
Project Name: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS Substation at Kutcha and 132/33 kV GIS Substations at Phutskila, Monirampur, Maheshpur, Meherpur on turnkey basis (Package T)				
Package T		Date:-	1/7/2025	
Sl No/ DES PPE Item		Unit	RECEIVED QTY	Available QTY
1	MESA PHONE, TYPE - SHOULDER, MAKE - ARJUN, MODEL - AM-25H PA/	Numbers	10.0	10.0
2	MERSONMETER, TYPE - DIGITAL, MAKE - EXTECH, MODEL - AN300	Numbers	0.0	0.0
3	WTTG CLAMP, MOC - MS, DIA - 22 - 34 MM	Numbers	0.0	0.0
4	EAR BUD, Name:	Numbers	10.0	10.0
5	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	0.0	10.0
6	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	80.0	1.0
7	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 9, Electrical grade.	Pairs	100.0	80.0
8	SAFETY SHOES, APPLICATION - For staff, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 10, Electrical grade.	Pairs	200.0	20.0
9	SLIM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 7 (Full length)	Pairs	0.0	0.0
10	ROCK CHAIR, MATERIAL - Nylon Polyester, SIZE - Width - 44 mm, Capacity - 23kg	Numbers	0.0	0.0
11	SLIM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 8 (Full length)	Pairs	80.0	1.0
12	SLIM BOOTS, MATERIAL - PVC, PATTERN - With steel toe, SIZE - 9 (Full length)	Pairs	40.0	10.0
13	SAFETY HELMET, MATERIAL - HDPE, TYPE - Ratchet, COLOUR - White, With chin strap with embossed LST logo	Numbers	200.0	10.0
14	SAFETY SHOES, APPLICATION - For workmen, MATERIAL - Leather, TYPE - Male, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 7, Electrical grade.	Pairs	0.0	0.0
15	ROPE GRAB FALL ARRESTER, SIZE - 30m long anchorage frame:	Numbers	10.0	1.0



16	SAFETY SHOES, APPLICATION: - For workmen; MATERIAL: - Leather; TYPE: - Male; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8; Electrical grade	Pairs	0.0	0.0
17	SHOULDER PAD; MATERIAL: - Leather	Numbers	0.0	0.0
18	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - A-type; COLOUR: - Yellow; OTHER SPECIFICATIONS: - with chin strap	Numbers	200.0	80.0
19	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - A-type; COLOUR: - Blue; OTHER SPECIFICATIONS: - with chin strap	Numbers	10.0	3.0
20	LEATHER HAND GLOVES; APPLICATION: - Welding work; SIZE: - 14" long; OTHER SPECIFICATIONS: - With inside cotton lining	Pairs	100.0	30.0
21	SAFETY HELMET; MATERIAL: - HDPE; TYPE: - A-type; COLOUR: - Yellow; With chin strap; with embossed L&T logo	Numbers	30.0	1.0
22	ROPE-GRAB FALL ARRESTER; OF certified conforming to BS 1181-2-2003 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm bearing	Numbers	0.0	0.0
23	RETRACTABLE FALL ARRESTER BLOCK LENGTH: - 13 m; OF certified and conforming to BS 3603:2003 Being made up of high impact strength polymer coated with galvanized steel wire rope of dia. 4.5mm; provided with internal snap hook anchorage and with swivel action	Numbers	0.0	0.0
24	SAFETY HELMET REPL; TYPE: - B-type; OTHER SPECIFICATIONS: - With nylon chin strap	Numbers	N/A	
25	APRON; APPLICATION: - Welding work; MATERIAL: - Leather; OTHER SPECIFICATIONS: - with full sleeves	Numbers	10.0	3.0
26	SAFETY SHOES; APPLICATION: - For workmen; MATERIAL: - PVC; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8	Pairs	0.0	0.0
27	REFLECTIVE JACKET; MATERIAL: - Polyester 300 GSM; COLOUR: - Orange; Reflective tape: mini prismatic reflective Make 3 cm wide total length- 260 cm, reflective L&T logo with L&T LIFE & TRAFFIC WARNING logo at front and back opening type: front	Sets	100.0	30.0
28	SAFETY SHOES; APPLICATION: - For workmen; MATERIAL: - PVC; PATTERN: - With steel toe; TYPE OF SOLE: - Direct injected PVC sole; SIZE: - 8	Pairs	0.0	0.0
29	FULL BODY SAFETY HARNES; MATERIAL: - Nylon; WITH DOUBLE LANYARD SCARFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT	Sets	10.0	6.0



30	SAFETY SHOES, APPLICATION - For staff, MATERIAL - PU, PATTERN - With steel toe, TYPE OF SOLE - Direct (Haired single density polyurethane sole, SIZE - 8.	Pairs	0.0	0.0
31	ANCHORAGE LINE, MATERIAL - POLYARIDE ROPE, LENGTH - 66 m, SIZE - 14 mm Dia.	Numbers	0.0	0.0
32	SAFETY HELMET/MATERIAL - PVC TYPE - Load carrying, COLOUR - Yellow, With chin strap.	Numbers	0.0	0.0
33	REFLECTIVE JACKET, MATERIAL - Polyester, COLOUR - Green, 100% Glass Bead reflective tape, 5 cm wide Total length - 232 cm, reflective L&T logo at front and back, opening type: front vest with 2-3 large Velcro.	Sets	0.0	0.0
34	COTTON HAND GLOVES, GRADE - Grade - 1, SIZE - 10, long, WEIGHT - 80, With latex coating on one side.	Pairs	250.0	30.0
35	RUBBER HAND GLOVES, APPLICATION - Electrical work, GRADE - 23 W, SIZE - 34, long, Acrylic latex (grip).	Pairs	25.0	3.0
36	NOISE MASK, MATERIAL - Cotton, TYPE - Reusable.	Numbers	150.0	50.0
37	SAFETY SHOES, MATERIAL - PU, TYPE - Mule, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 8, Electrical grade.	Pairs	0.0	0.0
38	SAFETY SHOES, MATERIAL - PU, TYPE - Mule, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 9, Electrical grade.	Pairs	0.0	0.0
39	SAFETY SHOES, MATERIAL - PU, TYPE - Mule, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 9, Electrical grade.	Pairs	0.0	0.0
40	SAFETY HELMET, MATERIAL - HDPE, TYPE - Basic, COLOUR - Green, With chin strap.	Numbers	35.0	2.0
41	RETRACTABLE FALL ARRESTER BLOCK, MATERIAL - Polyester, LENGTH - 13 m.	Numbers	0.0	0.0
42	REFLECTIVE JACKET, MATERIAL - Polyester (80% BSM), COLOUR - Orange Red, SIZE - Medium (M), With full sleeves.	Numbers	35.0	2.0
43	SAFETY SHOES, MATERIAL - PU, TYPE - Mule, PATTERN - With steel toe, TYPE OF SOLE - Polyurethane sole, SIZE - 9, Electrical grade.	Pairs	30.0	3.0
44	SAFETY HELMET, MATERIAL - HDPE, TYPE - Basic, COLOUR - Red, With chin strap.	Numbers	0.0	0.0
45	SAFETY HELMET, MATERIAL - HDPE, TYPE - Basic, COLOUR - Red, With chin strap.	Numbers	0.0	0.0
46	SURVIVAL ITEMS, Reusable Waterproof Rubber Gloves.	Pairs	35.0	3.0
47	MEDICINES, SNARE BITE MEDICINE KIT.	Numbers	10.0	1.0
48	FIRE EXTINGUISHER ABC TYPE, CAPACITY - 4 kg.	Numbers	30.0	4.0
49	FIRE BUCKETS, CAPACITY - 3 L, NUMBERS - 3; OTHER SPECIFICATIONS - With Stand & Canopy.	Numbers	30.0	4.0
50	MEDICINES, HAND SANITIZER PERFL 3 LTR.	Numbers	25.0	1.0



51	CO2 GAS TYPE FIRE EXTINGUISHER, CAPACITY - 5 kg; OTHER SPECIFICATIONS - Wall mounted With stand.	Numbers	0.0	0.0
52	CO2 GAS TYPE FIRE EXTINGUISHER, TYPE - CO2, CAPACITY - 5.5 kg; OTHER SPECIFICATIONS - Wall mounted.	Numbers	30.0	0.0
53	FIRE BUCKET STAND, TYPE - T type.	Numbers	N/A	
54	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns; OTHER SPECIFICATIONS - 500 m roll.	Numbers	N/A	
55	TESTER, TYPE - Handheld measurable induction type.	Numbers	N/A	
56	Safety Manometer, TYPE - Full body; OTHER SPECIFICATIONS - With park.	Numbers	N/A	
57	SAFETY BARRICADE TAPE, MATERIAL - LDPE, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 75 mm, THICKNESS - 30 microns; OTHER SPECIFICATIONS - 500 m roll.	Numbers	N/A	
58	DISCHARGE ROD, TYPE - Telescopic, DISCHARGE VOLTAGE - 33 kv; WIRE SIZE - 10 mm ² ; WIRE LENGTH - 15 m.	Numbers	N/A	
59	TESTER, TYPE - Handheld measurable induction type.	Numbers	N/A	
60	TESTER, TYPE - Pen Type.	Numbers	N/A	
61	DISCHARGE ROD, TYPE - Telescopic, DISCHARGE VOLTAGE - 33 kv; WIRE SIZE - 10 mm ² ; WIRE LENGTH - 15 m.	Numbers	N/A	
62	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, with heavy rubber base.	Numbers	N/A	
63	TOOL, LIFTING BAG, 25 kg.	Numbers	N/A	
64	STRETCHER, TYPE - canvas cover wooden spine (4500mm).	Numbers	N/A	
65	SAFETY BARRICADE TAPE, MATERIAL - PVC, TYPE - Reflective, COLOUR - Red & white stripes, WIDTH - 8 ; THICKNESS - 100 microns.	Numbers	N/A	
66	TRAFFIC SAFETY CONE, MATERIAL - LDPE, SIZE - 750 mm height, with heavy rubber base.	Numbers	N/A	
67	MEDICAL EQUIPMENT AS DESCRIBED FURTHER, Ambu Bag.	Numbers	N/A	
68	EARTH ROD DRIVING SPKZ, MATERIAL - GL, SUITABLE ROD - 18 mm dia. rod.	Numbers	N/A	
69	BINDULAR, MAKE - Bymec, MODELS - 111250.	Numbers	N/A	



Annexure-30: Incident Register

Package 2



Incident Register (January – June 2025)

Date	Time	Location	Description of Incident	Injury Details	Immediate Action Taken	Root Cause	Corrective/Preventive Action	Reported By
12 Jan 2025	10:15 AM	Site entrance gate	Worker slipped on wet surface	Minor bruise on left arm	Provided first aid, advised rest	Wet surface due to morning dew	Placed anti-slip mats, added caution sign	Safety Officer Ahmed
27 Feb 2025	1:30 PM	Material storage area	Small coil while handling steel rod	Small cut on finger	Cleaned and bandaged	No gloves worn	Reinforced PPE use training, ensured gloves availability	Supervisor Hasan
18 Apr 2025	9:45 AM	Workshop area	Worker tripped over power cable	No injury	Worker checked, no treatment needed	Poor cable management	Cables secured and removed properly	Safety Officer Mina
21 May 2025	2:20 PM	2nd floor scaffold	Tool fell but no one injured	None	Area cordoned off, tool retrieved	Improperly secured tool	Toolbox talks on tool securing, inspections intensified	Foreman Rabiul



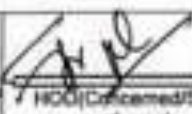
Sensitivity (SPT) Classification Information

Package 4

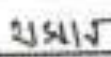
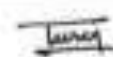
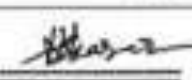
 Transrail Lighting Limited	Incident Investigation Report (Non-Reportable Accident (Minor) / Property Damage / Fire Incident / Environment Incident / Vehicle Incident / First Aid Incident / Near Miss)		Format No: FICONST.F000555
			Rev. No: 02 Date: 01.03.2024
Name of Site / Line / Factory / Office: G-479 ADB-P4			
Incident Investigation Report No.	01 feb-25	Date of Investigation:	20.02.25
Location/Area:	22/0	Date of Incident	21.02.25
Department:	Construction	Time of Incident:	10am
Employee (Company/Contractor)	CONTRACTOR		
Name of the Contractor (if applicable)	FU ENGG		
Name of Injured Employee (Not Applicable in case of Near-Miss)	NIL		
Designation:	NIL		
Name of Person Reporting the Incident	JUEL		
Incident Descriptions/Sequence of Events incident- A near miss incident occurred while a workman was throwing stones into the mixture machine drum. Unfortunately, some of the stones hit the mixture machine operator, no property damages no any injure.			
Findings - while a workman was throwing stones into the mixture machine drum. Unfortunately, some of the stones hit the mixture machine operator			
Root Cause of Incident. The root cause of the incident was the lack of proper communication and coordination between the workman and the mixture machine operator.			
Name of Witness:	Juel Islam		
Worker Participation & Consultation: Juel Islam Nitro gopal sarkar			
Recommendations/Corrective Actions -- Provide additional training on safe material handling practices for workmen Increase supervision and oversight to ensure safe working conditions Ensure that mixture machine operators wear proper PPE, including safety glasses and a hard hat Implement a system for communicating and coordinating material handling activities between workmen and machine operators			
 Worker/Worker Representative	 Safety Officer	 HOD (Concerned/Site in charge)	 Regional/Factory Head
Effectiveness of Corrective Action: Name of Safety Officer/HOD (To be done within 30 days from the date of incident by Safety Officer or HOD of another Area)			

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CS CamScanner

 Incident Investigation Report (Non-Reportable Accident (Minor) / Property Damage / Fire Incident / Environment Incident / Vehicle Incident / First Aid Incident / Near Miss)		Format No: F/CONST.FOR/005A Rev. No: 02 Date: 01.03.2024	
Name of Site / Line / Factory / Office: G-479 ADB-P4			
Incident Investigation Report No:	01 March-25	Date of Investigation:	20.03.2025
Location/Area:	18/D E	Date of Incident:	19.03.2025
Department:	Construction	Time of Incident:	8.58am
Employee (Company/Contractor):	CONTRACTOR		
Name of the Contractor (If applicable):	SAHAJALAL ERECTOR		
Name of Injured Employee (Not Applicable in case of Near Miss):	NIL		
Designation:	NIL		
Name of Person Reporting the Incident:	Devendar kumar		
Incident Descriptions/Sequence of Events incident- A near miss incident occurred. a tower fitter was working on a tower when a tool fell from their hand. Fortunately, no one was injured, and no property damage occurred.			
Findings - A tower fitter was working on a tower when a tool fell from their hand.			
Root Cause of Incident. The investigation revealed that the tower fitter's hands were sweaty, causing the tool to slip and fall. Contributing factors may include: High temperature and humidity			
Name of Witness:	Devendar Kumar		
Worker Participation & Consultation: Devendar kumar Monir hussain			
Recommendations/Corrective Actions -- 1. Provide tower fitters with grip aids or hand protection to prevent tools from slipping. 2. Ensure regular breaks and rest periods to prevent fatigue and sweating. 3. Consider providing cooling towels or other heat stress prevention measures			
 Worker/Worker Representative	 Safety Officer/HSE Engineer	 HOD (Concerned/Site in charge)	 Regional/Factory Head
Effectiveness of Corrective Action Name of Safety Officer/HOD (To be done within 30 days from the date of incident by Safety Officer or HOD of another Area)			
All concerns are requested to comply corrective action immediately.			

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		Incident Investigation Report (Non-Reportable Accident (Minor) / Property Damage / Fire Incident / Environment Incident / Vehicle Incident / First Aid Incident / Near Miss)		Format No: FICONST.FCR00004
				Rev. No: 02 Date: 01.01.2024
Name of Site / Line / Factory / Office: G-479 ADB-P4				
Incident Investigation Report No.	02	Date of Investigation:	26.04.25	
Location/Area:	15/4	Date of Incident:	25.04.25	
Department:	Construction	Time of Incident:	10:30 am	
Employee (Company/Contractor)	Contractor			
Name of the Contractor (If applicable)	Mollah Traders.			
Name of Injured Employee (Not Applicable in case of Near-Miss)	NA			
Designation:	NA			
Name of Person Reporting the Incident	md. Sobel Rana.			
Incident Descriptions/Sequence of Events Incident: A near miss incident occurred while a Lineman was working on the tower, tightening the bolts nuts, unfortunately, a spanner suddenly slipped from his hand & fall to the ground. No property loss or injury.				
Findings: While a Lineman was working on the tower, tightening the bolts nuts unfortunately, spanner suddenly slipped from his hand.				
Root Cause of Incident: (i) inadequate grip of the spanner by the Lineman. (ii) Distraction or loss of focus while working at heights.				
Name of Witness:	md. Sobel Rana.			
Worker Participation & Consultation: Tushar Mola. Debasis Lwin.				
Recommendations/Corrective Actions: (i) Tool holding training. (ii) Regular tool maintenance. (iii) Heighted Awareness. (iv) Spanner Safety Device.				
 Worker/Worker Representative	 Safety Officer	 HOD(Concerned/Site in charge)	 Regional/Factory Head	
Effectiveness of Corrective Action: Name of Safety Officer/HOD (To be done within 30 days from the date of incident by Safety Officer or HOD of another Area)				
All concerns are requested to comply corrective action immediately				

Page 1 of 1



Project Name: Dhaka and Western			Low Transmission Grid Expansion Project (Package-5)			
Subject: Accident / Incident Report			Date: / /		Page: /	
Sl. No.	Date	Details of Incident	Location	Time	Remarks	Remarks
12/1/2020	12/1/2020	At the time of the accident, the power line was under maintenance. The accident occurred due to the negligence of the workers. The power line was not properly secured and the workers were not wearing safety gear. The accident resulted in the death of one worker and the injury of another worker. The power line was damaged and the power supply was interrupted for several hours. The accident was caused by the negligence of the workers and the lack of proper safety measures. The accident was reported to the relevant authorities and the necessary steps were taken to prevent such accidents in the future.	At the time of the accident, the power line was under maintenance. The accident occurred due to the negligence of the workers. The power line was not properly secured and the workers were not wearing safety gear. The accident resulted in the death of one worker and the injury of another worker. The power line was damaged and the power supply was interrupted for several hours. The accident was caused by the negligence of the workers and the lack of proper safety measures. The accident was reported to the relevant authorities and the necessary steps were taken to prevent such accidents in the future.	At the time of the accident, the power line was under maintenance. The accident occurred due to the negligence of the workers. The power line was not properly secured and the workers were not wearing safety gear. The accident resulted in the death of one worker and the injury of another worker. The power line was damaged and the power supply was interrupted for several hours. The accident was caused by the negligence of the workers and the lack of proper safety measures. The accident was reported to the relevant authorities and the necessary steps were taken to prevent such accidents in the future.	At the time of the accident, the power line was under maintenance. The accident occurred due to the negligence of the workers. The power line was not properly secured and the workers were not wearing safety gear. The accident resulted in the death of one worker and the injury of another worker. The power line was damaged and the power supply was interrupted for several hours. The accident was caused by the negligence of the workers and the lack of proper safety measures. The accident was reported to the relevant authorities and the necessary steps were taken to prevent such accidents in the future.	At the time of the accident, the power line was under maintenance. The accident occurred due to the negligence of the workers. The power line was not properly secured and the workers were not wearing safety gear. The accident resulted in the death of one worker and the injury of another worker. The power line was damaged and the power supply was interrupted for several hours. The accident was caused by the negligence of the workers and the lack of proper safety measures. The accident was reported to the relevant authorities and the necessary steps were taken to prevent such accidents in the future.

Package 6

project name: Dhaka and western zone transmission grid expansion
 project (package-06)
 sub: Accident / Incident report.

তারিখ	কর্মির নাম	অবস্থা বিবরণ	অন্য প্রাসঙ্গিক তথ্য	মন্তব্য
২৮/০৫/২০	শ্রী: ফারিখ	১. কাজে অবস্থান ২. কাজের সময় ৩. কাজের সময় ৪. কাজের সময়	১. কাজের সময় ২. কাজের সময় ৩. কাজের সময় ৪. কাজের সময়	নির্ণয় করা কিছু নিয়ম অনুসরণ করা
২৯/০৫/২০	শ্রী: নূর	১. কাজে অবস্থান ২. কাজের সময় ৩. কাজের সময় ৪. কাজের সময়	১. কাজের সময় ২. কাজের সময় ৩. কাজের সময় ৪. কাজের সময়	নির্ণয় করা কিছু নিয়ম অনুসরণ করা



PROJECT TITLE		
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33 KV GIS SUBSTATION AT PHULTOLA, MONIRAMPUR, MAHESHPUR, MEHERPUR ON TURNKEY BASIS (PACKAGE-7).		
EMPLOYER	CONTRACTOR	SUB-CONTRACTOR
		
POWER GRID COMPANY OF BANGLADESH LTD. (PGCB)	CMEC – CNEEC Joint Venture	MAZUMDER ENTERPRISE (ME)

BUILDING NAME/SITE NAME
230/132/33KV GIS Substation at Rupsha

DOCUMENT TITLE
INCIDENT REPORT