SEMI ANNUAL ENVIRONMENTAL 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 (DWZTGEP), with a total investment of USD 730 million, aims to enhance the capacity, reliability, and technical efficiency of the electricity transmission system in Dhaka and the western region of Bangladesh. The project supports the construction of new substations and transmission lines, upgrades existing transmission facilities, and strengthens the network in the southwest and northwest to meet growing electricity demand driven by irrigation needs and expanding industrial activities.

ii. The project covers five administrative divisions and twenty-one districts and includes the construction of 15 new substations, ten overhead transmission lines, and ten Line-In Line-Out (LILO) connections, totaling 394 km of overhead lines and 11.60 km of underground cables in Dhaka, together with bay extensions at nine existing grid substations. Most subprojects are located in agricultural and settlement areas. Land acquisition involves approximately 79.60 acres for new substations and one acre for tower footings, while bay extensions are generally accommodated within existing substation premises, except at Satkhira where additional land is required.

iii. The project is required to comply with Asian Development Bank safeguard requirements. An Environmental Clearance Certificate was issued by the Department of Environment on 28 July 2020 and remains valid until 28 July 2026 for the July–December 2025 reporting period. Updated IEE addendum have been prepared and disclosed where design changes or scope adjustments occurred, and environmental management and monitoring requirements have been incorporated into project implementation.

iv. Environmental sensitivities and risks associated with construction activities include temporary noise, traffic disturbance, crop losses, and potential community exposure along populated transmission corridors. These risks have been assessed and are being managed through the implementation of approved Environmental Management Plans, site-specific mitigation measures, and regular environmental quality monitoring. Particular attention is given to right-of-way management, restoration of agricultural land, electromagnetic field exposure along inhabited sections, and community safety near construction sites. Monitoring during the reporting period indicates that most of the impacts are generally being controlled within applicable standards, subject to continued implementation of mitigation measures and corrective actions where required.

v. During the July–December 2025 reporting period, construction activities such as tower foundation works, conductor stringing, substation construction, and material transport caused localized and temporary impacts including short-term dust generation, noise, traffic disturbance, and limited crop damage along some right-of-way sections; however, site supervision records and quarterly monitoring results confirm that these impacts were largely controlled through implementation of the approved Environmental Management Plans and package-specific CESMPs.

vi. Mitigation measures applied included regular water spraying, daytime work scheduling, traffic control with signage and flagmen near settlements, equipment maintenance, restoration of agricultural land after foundation works, and compensation for crop losses through the district authorities. Inspections by Power Grid and the supervision consultants found that waste segregation, sanitation at labor camps, secondary containment for fuels and chemicals, and provision of PPE were generally in place, while minor non-compliances were addressed through Corrective Action Plans and follow-up monitoring. Overall, environmental quality monitoring for Packages 1–7 indicates general compliance with national standards and lender requirements during the reporting period, subject to continued mitigation and strengthened supervision at selected sites.

vii. 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. Package-1 2. Package-2 3. Package-3 4. Package-4 Layout approved for following substation subprojects: 5. Package-5 6. Package-6 7. Package-7
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	4 for transmission line construction and 3 for substation construction.
National Environment, Health and Safety Clearance(s) Obtained	ECC was valid till 28/07/2026,
Contractor(s) Given Access to Site	19 for transmission line construction and 11 for substation construction
Construction Progress (%)	Package-1: 65% Package-2: 100%, Commissioned in June 2025. Package-3: 89% Package-4: 85%.

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
	Package-5: 29% Package-6: 32% Package-7: 55% Package-8: The contract has been terminated effectively from 27/05/2024, evaluation of rebidding ongoing.
Unanticipated Impacts including Change of Scope or Design	Addendum 1 to IEE covers the following subjects: 1. Satkhira-Manirampur 2. Gopalganj-Shibchar Addendum 2 to IEE covered the following sub-projects: 1. Satkhira-Rupsha 2. Purba Sadipur-Domar 3. Niamatpur-Patnitola 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 Addendum 6 to IEE (awaiting ADB's approval) covered the following sub-projects: 1. LILO of Ghorashal-Tongi 230 kV Line to Kaliganj and 2. LILO of Ghorashal-Kaliganj-Purbachal-Bashundhara 400 kV and 230 kV Line to Kaliganj and Purbachal (Stringing only)
Number of Site Inspections and Audits Undertaken by Environment Safeguards Staff in Reporting Period	10
Corrective Action Required from Previous Reporting Period	4

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Outstanding Corrective Action this Reporting Period	Yes. 4 Corrective Actions were identified during this reporting period
Non-Compliances Recorded this Reporting Period	Five
Corrective Action Required	YES
Number of Health and Safety Incidents	16 (near miss)
GRM Functional	YES, GRM functions at construction sites of packages 1, 2, 3, 4, 5, 6 and 7.
Number of Unresolved Grievances from Prior Reporting Period	0
Number of Grievances Received in Reporting Period	1
Number of Grievances Resolved this Reporting Period	1
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	74
Total consultation carried out	6
Number of packages that conducted Quarterly Environmental Quality Monitoring	7 (Package 1-7)
Safeguard Performance Snapshot during the reporting period	• Environmental supervision and monitoring across Packages 1–7 confirm that most EMP requirements were implemented satisfactorily, with effective controls in place for dust, noise, traffic, waste handling, site restoration, and occupational health and safety in accordance with national standards and ADB safeguard obligations. • A small number of site-specific deficiencies were identified during the reporting period, including short-term air quality exceedances and gaps in environmental housekeeping and monitoring records at limited locations—particularly within Package-4—for which corrective actions were formally issued and are under active follow-up.

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 Substation[1]

viii. 2 nos. 132 kV GIS Bay Extension at Purba Sadipur Substation

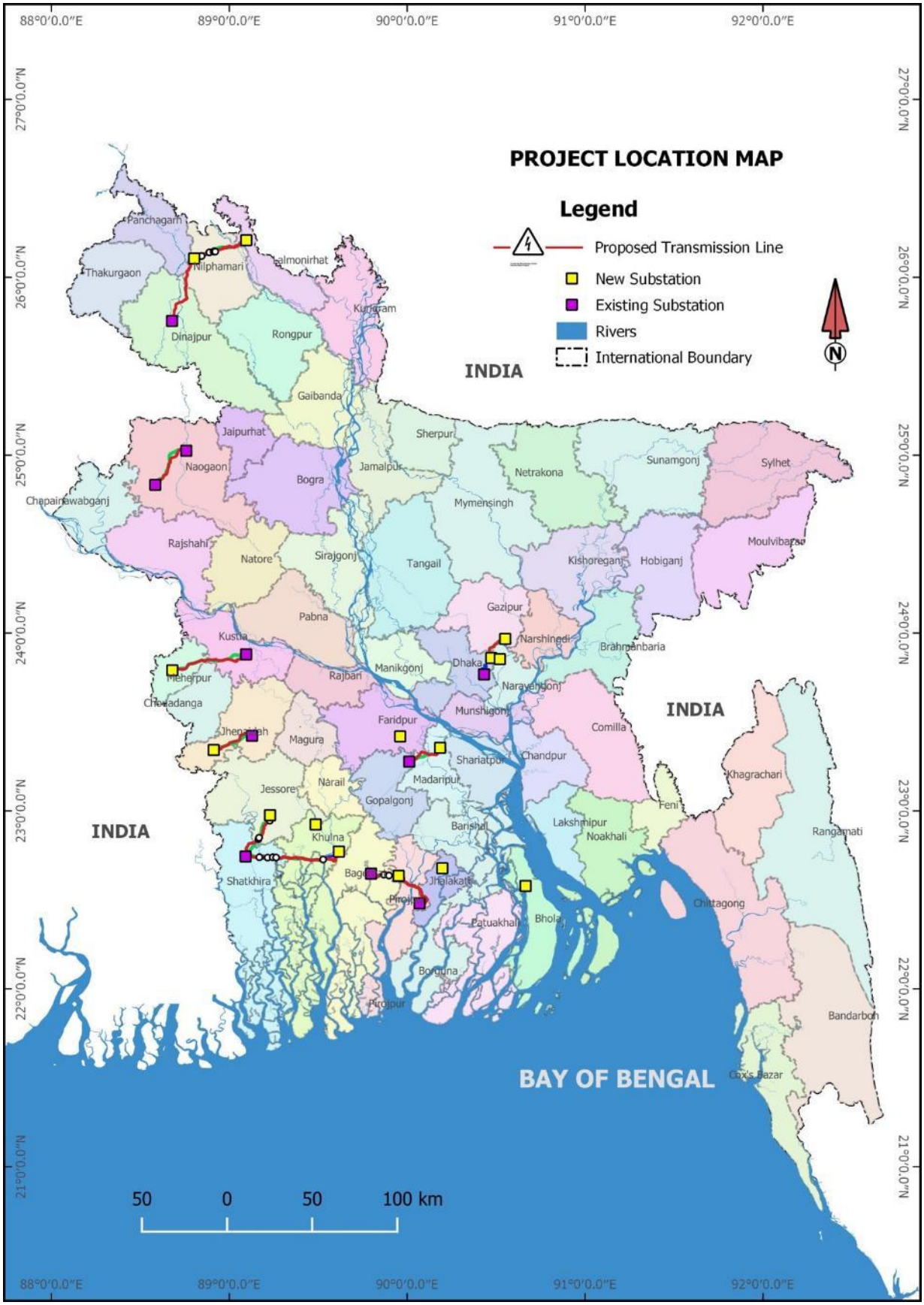
ix. 2 nos. 132 kV GIS Bay Extension at Bhandaria Substation

[1] 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 is valid till 26/07/2026 (Annexure-1: Renewal of Environmental Clearance Certificate) 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: Link to Approved CESMPs). 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: SCC 22.2.7). Links to approved CESMPs of packages- 1, 2, 3, 4, 5, 6 and 7 are available as Annexure-4: Link to Approved CESMPs. 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. IEE addendum-6 (draft) submission date: 10/12/2025 Construction activity started: August 2025.	65%	30/06/2026	CSEMP of package 1 approved by PMU (Annexure-4: Link to Approved CESMPs). Environmental monitoring carried out for Package 1 during reporting period and presented the monitoring result in Chapter 3
Package-2	Rampura- Bashundhara 132kV double circuit underground cable line: 11.6 km underground	Contract signed with JV of TBEA and TBEA Luneng on 16/10/2022. Details of this line are included in IEE Addendum-5.	100%	25/06/2025	Environmental monitoring carried out for Package 2 during reporting period and presented the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
Package-3	Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing 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	Contract signed with L&T, India on 09/05/2021. 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	89%	30/04/2026	Kaliganj- Maheshpur line Anti theft charge done successfully. Environmental monitoring carried out for Package 3 during reporting period and presented the monitoring result in Chapter 3
Package-4	Purba Sadipur-Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km, 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	Contract signed with Transrail Lighting, India on 30/06/2021. IEE addendum-1 (draft) submission date: 18/04/2022 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	85%	30/06/2026	Environmental monitoring carried out for Package 4 during reporting period and updated the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km				
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. IEE addendum 5 (final) submission date: 13/09/2024	29%	30/06/2026	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 IEE addendum 5 (final) submission date: 13/09/2024	32%	30/06/2026	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 submission (final) date: 13/12/2023	55%	31/05/2026	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 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.	Contract signed with Energypac-CSEPDI 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
Package-10	Procurement of Drones	Contract signed on 18/01/2024	100%	31/12/2024	-

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	√	√	√	√	√	√	√	N/A
Semi-annual Report	√	√	√	√	√	√	√	N/A
Baseline Environmental Quality Monitoring								
Air Quality	√	√	√	√	√	√	√	N/A
Noise Level	√	√	√	√	√	√	√	N/A
Surface Water Quality	√	√	√	√	√	√	√	N/A
Groundwater Quality	√	√	√	√	√	√	√	N/A
Soil Quality	√	√	√	√	√	√	√	N/A
Periodic Environmental Quality Monitoring								
Air Quality	√	√	√	√	√	√	√	N/A
Noise Level	√	√	√	√	√	√	√	N/A
Surface Water Quality	√	√	√	√	√	√	√	N/A
Groundwater Quality	√	√	√	√	√	√	√	N/A
Soil Quality	√	√	√	√	√	√	√	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	Yes	Yes	https://erp.powergrid.gov.bd/w/esia_reports/show_esia_reports	
2	Yes	Yes		
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 28/07/2026.

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. Electricity Rules-2020 (amended in 2022) requires compensation to the owners on whose land the transmission line towers have been erected based on official market rate through the DC of the concerned district. The PIU has transferred the estimated compensation amount to five (05) such districts. Details are available in the SMR.

Table 2-1: Compliance with ECC Requirements

Sl 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

Sl No	ECC Requirement	Compliance Status	Remarks
			plan has been prepared to comply with the 1:3 planting ratio.
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	Will be complied	Will be reported in case of any emergency.

Sl No	ECC Requirement	Compliance Status	Remarks
	e. Current operations (abandoning the site. firefighting. etc.)		
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.	Complied	Land handed over to the landowners after commissioning transmission lines in a ready-to-cultivated condition (Annexure 36: Land Handed Over to The Landowners After Completing Transmission Line Tower Erection and Stringing).
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 1, 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 (Annexure-7: GRC & Annexure-8: Compensation Paid by the Contractor to the Local Community).

Table 2-2: Compliance with Environmental Covenants

Schedule #, Para. #	Covenant	Compliance Status	Remarks
Schedule 4, Para. 10	Environment: 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 #, Para. #	Covenant	Compliance Status	Remarks
Schedule 4, Para. 11	Land Acquisition and Involuntary Resettlement: 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 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.	Being complied	Necessary RoW are being made available to the contractors as per work schedule following all 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	Tribes, Minor Races, Ethnic Sects and Communities: 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 borrower shall or shall cause 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	Being complied	Both Power Grid and the contractors have human and financial resources to implement the respective

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	budgetary and human resources to fully implement the EMP and the CAP.		responsibilities of EMP and CAP.
Schedule 4, Para. 15	Safeguards Related Provisions in Bidding Documents and Works Contracts: 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, ethical 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.	Being complied	All the provisions are included in 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	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
	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. (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.	Being complied	Annexure-7: GRC & Annexure-8: Compensation Paid by the Contractor to the Local Community

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	(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 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 Annexure-7: GRC & Annexure-8: Compensation Paid by the Contractor to the Local Community).

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: PIU Set-Up. 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 of PIU and implementation consultant

Project Implementing Bodies	Name	Designation	Email Address	Contact Number	Roles
1. Power Grid	Mohammed Faizul Kabir	Project Director (A/C)	pd.dwztgep@pgcb.gov.bd	Mohammed Faizul Kabir	Project Director (A/C)
	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

Table 2-4: Safeguard personnel of the contractors

Package No	Name of the Safeguard Officer	E-mail	Contact No	Role	Remarks
1	Rahad Hossain	rahad.hanbaek@gmail.com	01716334118	Overall EMP implementation and reporting	
2	Faizur Rabbee	rabbeefaizur@gmail.com	01723656048		
3	Anoop A T	anoopat@Intecc.com	01715251106		
4	Suresh Hazra	suresh.hazra@transraillighting.com	01892694400		
5	Sohel Rana	sohelranaeee76@gmail.com	01743883846		Since P-5 & 6 are being implemented
6					

					by the same contractor and the project sites are located in the same upazila; they are managed by the same person.
7	Tang Lei	556971@qq.com	01778596299		

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 1, 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. In this reporting period only one 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 2-5 and Table 2-6.

Table 2-5: 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 and available at all construction site and chemical store
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	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	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 containers

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
				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	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)	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	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	Not Complied	Proper PPE was not found in Package 7 and 1
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	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 2-6: 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)	Complied	Construction debris were 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	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	Complied	Solid wastes were properly cleared off.
Community H&S	Safety barriers and warning signs surrounding tower construction sites	Safety signs are available at all sites (Annexure-22)	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 descoped), 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. Preliminary tree plantation plan submitted by the contractor of package-3 has been reviewed by ADB and further updating has been recommended. Accordingly, updating of the TPP is under progress and will be shared with ADB once completed (Annexure 38: Comments Responses on TPP of Package 3). The contractors of packages-1 and 4 are also preparing their TPP. The preliminary scope of package-2 was 230 kV 5 km underground+230 kV 0.5 km overhead+132 kV 9 km underground line. The IEE was prepared accordingly, and it was reported that 350 nos. of trees will be required to be removed. In the procurement stage. 230 kV portion was discarded and the scope became 132 kV 9.5 km underground+132 kV 1.5 km overhead. The subsequent IEE addendum shows total trees to be cut is 220 nos. The line was eventually constructed as 132 kV 11.6 km underground. For this underground line, alignment of the roads through different housing society has been used. No trees were required to be cut. Hence, replantation is not required. Tree plantation in substation packages (5, 6, 7 and 8) will be done inside the substation area. Hence, it will commence after completing the construction activities.

Table 2-7: Details of compensatory tree planation program as of Jul- Dec 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 Dec 25)	Trees planted (as of Dec 25)	Types of species planted	Plantation completion status	Survival status	Remarks
Package- 1	TPP preparation under progress	16	48	NA	00	00	Not yet commenced	NA	No tree felling was carried out during the reporting period
Package-2	Not Required	00	00	00	00	00	00	00	No tree removal was necessary as the line was

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 Dec 25)	Trees planted (as of Dec 25)	Types of species planted	Plantation completion status	Survival status	Remarks
									installed underground.
Package-3	Reviewed by ADB, updating as per ADB recommendations ongoing	10,359	31,077	5,600	1,143	4	Ongoing	Under observation	Plantation done at different substations of Power Grid under GMD-Khulna (South & North)
Package-4	TPP preparation under progress	4087	12261	2700	4428	6	Ongoing	Under observation	P-4 TPP has been submitted to the project office which is under review. It will be sent to ADB after Power Grid's verification. The tree plantation activities carried out so far is in line with the

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 Dec 25)	Trees planted (as of Dec 25)	Types of species planted	Plantation completion status	Survival status	Remarks
									submitted TPP and it will be reviewed once again after approval of the TPP.
Package-5	Tree plantation in substation packages will be done inside the substation area. Hence, it will commence after completing the construction activities								
Package-6									
Package-7									
Package-8	Previous contract terminated, evaluation of rebidding ongoing								

3 ENVIRONMENTAL QUALITY MONITORING

During this reporting period, periodic environmental monitoring was conducted in Package 1, 2, 3, 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 1, 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, PM_{10}, $PM_{2.5}$), SO_2, NO_2, CO, Pb, O_3, Sox and Nox 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, 3 and 4) and substation (Package 5, 6 and 7) locations. Air quality analysis results presented in Table 3-2. Monitoring photos shown in Annexure-33: Environmental Monitoring Lab Sheet.

Table 3-1: Air Quality Measurement Locations and Descriptions

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
Package 1				
1	AQ1	23°58'0.906"N 90°33'3.408"E	T-1/0	20.12.2025-21.12.2025
2	AQ2	23°57'28.528"N 90°33'23.954"E	T-4/0	
3	AQ3	23°57'10.977"N 90°33'18.231"E	T-3/0	
4	AQ4	23°56'50.084"N 90°33'25.961"E	T-2/3	
5	AQ5	23°56'20.567"N 90°33'34.481"E	T-2/1	
Package 2				
6	AQ6	23.81644N 90.43622E	Near the Substation Area in Bashundhara Residential Area	10.08.2025-11.08.2025
7	AQ7	23.79979N 90.44887E	Near United International University (UIU) Mosque	
8	AQ8	23.76667N 90.43124E	Near the Substation Area of Aftabnagar	
Package 3				
Satkhira- Rupsha TL				
9	AQ9	22.772409 N, 89.616823 E	Kudir Bottola, Khulna	17.12.2025-18.12.2025
10	AQ10	22.715719 N, 89.577748 E	Vadgati, Batiaghata, Khulna	

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
11	AQ11	22.733853 N, 89.415113 E	Bagdari Bazar, Dumuria, Khulna	
12	AQ12	22.740735 N, 89.256071 E	Chorgram, Tala, Satkhira	
Satkhira- Manirampur TL				
13	AQ13	22.741249 N, 89.091239 E	Magura, Satkhira	19.12.2025-20.12.2025
14	AQ14	22.868778 N, 89.185722 E	Protappur, Keshobpur, Jashore	
15	AQ15	22.960354 N, 89.229797 E	Aminpur, Keshobpur, Jashore	
Kushtia- Meherpur TL				
16	AQ16	23.873121 N, 89.092463 E	Battail, Boro Pukur Par, Kushtia	20.12.2025-21.12.2025
17	AQ17	23.841134 N, 88.914512 E	Malihad, Mirpur, Kushtia	
18	AQ18	23.841030 N, 89.035337 E	Baghdanga, Kushtia Sadar, Kushtia	
19	AQ19	23.827057 N, 88.777141 E	Gopalnagar, Gangni, Meherpur	
20	AQ20	23.791050 N, 88.679091 E	Natun Modondanga, Shampur, Meherpur	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
21	AQ21	23°17'5.39"N 90°1'32.03"E	T-2/0	09.11.2025-13.11.2025
22	AQ22	23°17'55.37"N 90°2'29.59"E	T-4/0	
23	AQ23	23°18'4.91"N 90°2'57.73"E	T-5/0	
24	AQ24	23°19'46.89"N 90°10'35.89"E	T-15/0	
25	AQ25	23°21'7.46"N 90°11'4.27"E	T-17/0	
Purba Sadipur- Domar TL				
26	AQ26	25°45'12.57"N 88°40'45.99"E	T-1/0	27.11.2025-01.12.2025
27	AQ27	25°51'37.67"N 88°43'50.66"E	T-8/0	
28	AQ28	25°57'28.54"N 88°45'29.11"E	T-16/0	
29	AQ29	26° 0'26.82"N 88°45'48.31"E	T-20/0	
30	AQ30	26° 5'6.73"N 88°47'20.49"E	T-25/0	

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
Niamatpur- Patnitola TL				
31	AQ31	25°47'24.11"N 88°41'21.95"E	T-3/0	21.11.2025-25.11.2025
32	AQ32	25°52'9.21"N 88°45'24.23"E	T-9/0	
33	AQ33	25°54'37.92"N 88°45'26.28"E	T-12/0	
34	AQ34	25°56'41.08"N 88°45'31.14"E	T-15/0	
35	AQ35	25°57'39.67"N 88°45'34.17"E	T-17/0	
Gopalganj-Shibchar TL				
36	AQ36	23°21'16.19"N 90°11'1.90"E	TT-2	15.11.2025-19.11.2025
37	AQ37	23°21'7.46"N 90°11'4.27"E	T-17/0	
38	AQ38	23°19'46.89"N 90°10'35.89"E	T-15/0	
39	AQ39	23°19'18.52"N 90°4'39.57"E	T-8/0	
40	AQ40	23°17'5.39"N 90°1'32.03"E	T-2/0	
Domar-Hatibandha TL				
41	AQ41	25°48'31.21"N 88°41'25.45"E	T-4/0	03.12.2025-07.12.2025
42	AQ42	25°52'46.24"N 88°45'49.71"E	T-10/0	
43	AQ43	25°54'37.92"N 88°45'26.28"E	T-12/0	
44	AQ44	25°57'28.54"N 88°45'29.11"E	T-16/0	
45	AQ45	26° 0'26.82"N 88°45'48.31"E	T-20/0	
Package 5				
400/230 kV GIS Substation at Kaliganj, Gazipur				
46	AQ46	23.968956 N 90.549117 E	In front of Hafej Sheikh's House	06-09-2025-07-09-2025
47	AQ47	23.968956 N; 90.549117 E	Located Near Nolir Bridge	
48	AQ48	23.963902 N; 90.549012 E	In front of Mamun Mia's House	
49	AQ49	23.969834 N; 90.552915 E	In front of Late Abdul Razzak's House	

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
Package 6				
400/230/132 KV GIS Substation at Purbachal				
50	AQ50	23.864726 N; 90.475538 E	In front of Dulal Mia's house	11.08.2025-12.08.2025
51	AQ51	23.866024 N; 90.475774 E	In front of Dipak Chakraborty' s Shop	
52	AQ52	23.862084 N; 90.476738 E	In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	
53	AQ53	23.867947 N; 90.476117 E	In front of Mohadev Karmakar's house	
Package 7				
54	AQ54	22°55'28.14" 89°29'7.99"E	Near 132/33 kV GIS substation at Phultola	08.09.2025 - 10.09.2025
55	AQ55	22°46'20.37"N 89°37'2.29"E	Near 230/132/33 kV GIS substation at Rupsha	
56	AQ56	23°47'27.41"N 88°40'42.72"E	Near 132/33 kV GIS substation at Maheshpur	
57	AQ57	23°20'39.43"N 88°55'27.94"E	Near 132/33 kV GIS substation at Meherpur	
58	AQ58	22°58'35.71"N 89°13'44.30"E	Near 132/33 kV GIS substation at Manirampur	

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 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: Environmental Monitoring Pictures and Annexure-33: Environmental Monitoring Lab Sheet.

34. Ambient air quality in Package-1 was monitored at five locations (AQ1–AQ5) and the results show a clear improvement in Q4-2025 compared to the baseline. During the baseline period, $PM_{2.5}$ (55–62 µg/m³) and PM_{10} (67–81 µg/m³) exceeded the IFC guideline values at all five locations; however, in Q4-2025, $PM_{2.5}$ reduced to 11.79–24.78 µg/m³ and PM_{10} reduced to 20.52–37.34 µg/m³, which are within both Bangladesh ECR-2023 and IFC standards at all monitoring points. Other pollutants such as CO, O_3, SOx and NOx also showed significant reductions and remained well below their respective limits, while lead (Pb) was below detection limit (BDL) at all locations. Overall, no air quality parameter exceeded the applicable standards at any of the Package-1 monitoring locations (AQ1–AQ5) during Q4-2025, indicating that air quality remained fully compliant during the reporting period.

35. Ambient air quality in Package-2 (Rampura–Bashundhara 132 kV line) was monitored at AQ6-AQ8 and showed overall improvement in Q4-2025 compared to baseline. $PM_{2.5}$ decreased to 12.09-13.55 µg/m³ and CO to 0.43–0.76 mg/m³, remaining within both Bangladesh and IFC limits at all locations. However, PM_{10} remained high at AQ6 (99.26 µg/m³) and AQ7 (82.63 µg/m³), which exceeded IFC guidelines, though still within national standards, while AQ8 (48.71 µg/m³) complied with IFC limits. Overall, fine particulates and gases were compliant, but dust-related PM_{10} exceedance persisted at AQ6 and AQ7 during the reporting period.

36. Ambient air quality in Package-3 (covering the Satkhira–Rupsha, Satkhira–Manirampur and Kushtia–Meherpur transmission lines) was monitored at locations AQ9 to AQ20 during the baseline and again in Q4-2025. The results show a substantial improvement in air quality during Q4-2025 compared to baseline conditions, particularly for particulate matter. During baseline monitoring, $PM_{2.5}$ ranged between 39.8 and 61.4 µg/m³ and PM_{10} ranged between 52.7 and 96.5 µg/m³, which exceeded the IFC guideline values at most locations. In Q4-2025, $PM_{2.5}$ reduced to 10.47–21.11 µg/m³ and PM_{10} reduced to 19.13–39.49 µg/m³ at all stations, which are within both Bangladesh ECR-2023 and IFC limits. Gaseous pollutants (CO, O_3, SOx and NOx) also declined significantly and remained well below their respective standards, while lead (Pb) was below detection limit (BDL) at all monitoring points. Overall, no air quality parameter exceeded the applicable standards at any of the Package-3 monitoring locations (AQ9–AQ20) during Q4-2025, confirming full compliance during the reporting period.

37. Ambient air quality in Package-4, covering the Bagerhat–Pirojpur–Bhandaria, Perib–Sedigan–Domar, Nilphamari–Patnitala, Gopalganj–Shibchar and Dhanerhat–Hatibandha transmission line corridors, was monitored at locations AQ21 to AQ45 during the baseline and again in Q4-2025. The results indicate a substantial improvement in air quality during Q4-2025 compared to baseline conditions. During the baseline period, $PM_{2.5}$ (34–72 µg/m³) and PM_{10} (41–96 µg/m³) exceeded the IFC guideline limits at several locations; however, in Q4-2025, $PM_{2.5}$ reduced to 10–32 µg/m³ and PM_{10} reduced to 29–69 µg/m³, which were within the Bangladesh ECR-2023 limits, although PM_{10} remained above the IFC guideline of 50 µg/m³ at some locations such as AQ23, AQ24, AQ26, AQ27, AQ30, AQ31, AQ32, AQ33, AQ36, AQ37, AQ38, AQ39 and AQ45. Other pollutants including CO, O_3, SOx and NOx remained well within applicable standards, and lead (Pb) was mostly below detection limit or very low at all monitoring points. Overall, while national air quality standards were met across Package-4, localized exceedances of IFC PM_{10} guidelines were observed in several locations, mainly due to construction activities and traffic on unpaved roads during the reporting period.

38. Ambient air quality in Package-5 (400/230 kV GIS Substation at Kaliganj, Gazipur) was monitored at AQ46 to AQ49 during the baseline and again in Q4-2025. The results show that $PM_{2.5}$ increased from 23–32 µg/m³ at baseline to 31–39 µg/m³ in Q4-2025, which exceeded the IFC guideline value of 25 µg/m³ at all four locations (AQ46–AQ49). Similarly, PM_{10} increased from 58–68 µg/m³ at baseline to 61–72 µg/m³ in Q4-2025, which exceeded the IFC limit of 50 µg/m³ at all monitoring points, although still within the Bangladesh ECR-2023 standard. Other pollutants such as SO_2, NO_2 and CO remained within acceptable limits, and lead (Pb) was below detection limit (BDL) at all locations. Overall, fine and coarse particulate matter exceeded IFC air quality guidelines at all Package-5 locations during Q4-2025, indicating the influence of intensive construction activities at the Kaliganj GIS substation site.

39. Ambient air quality in Package-6 (400/230/132 kV GIS Substation at Purbachal) was monitored at AQ50 to AQ53 during the baseline and again in Q4-2025. The results show that $PM_{2.5}$ remained between 29 and 35 µg/m³ and PM_{10} ranged from 56 to 61 µg/m³ during Q4-2025, which exceeded the IFC guideline values of 25 µg/m³ for $PM_{2.5}$ and 50 µg/m³ for PM_{10} at all four locations (AQ50–AQ53), although the concentrations were within the Bangladesh ECR-2023 limits. Compared to baseline, a slight improvement was observed in PM_{10} at some stations, but fine particulate pollution remained elevated due to ongoing substation construction activities. Other parameters including SO_2, NO_2 and CO were within acceptable limits, and lead (Pb) was below detection limit (BDL) at all locations. Overall, IFC exceedances for both $PM_{2.5}$ and PM_{10} were recorded at all Package-6 monitoring locations during Q4-2025, indicating that dust control measures need to be further strengthened at the Purbachal GIS substation site.

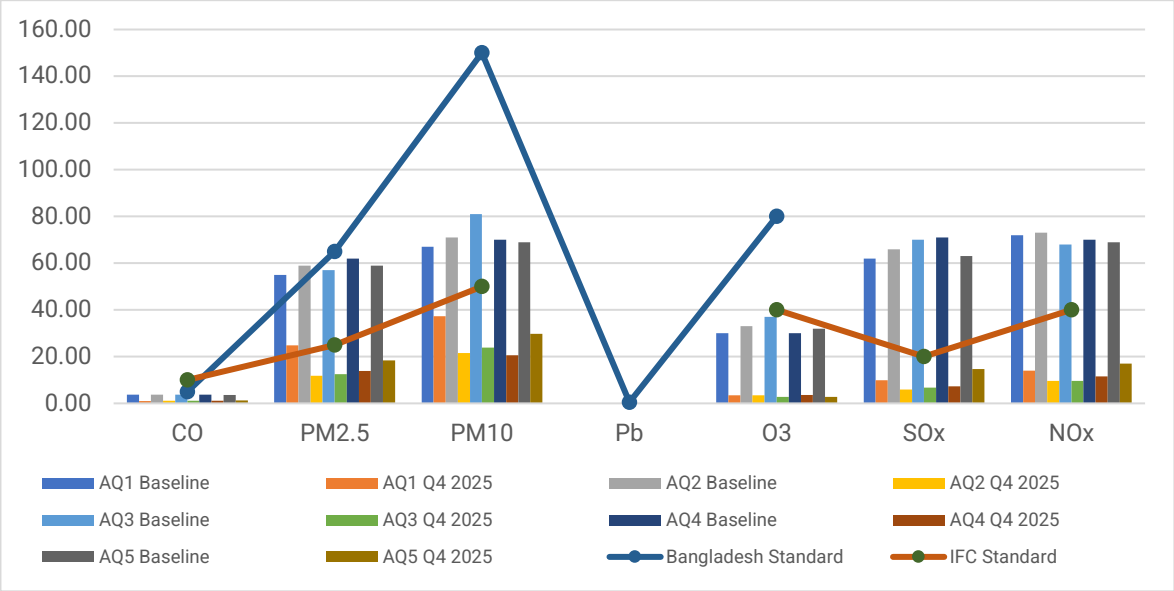
40. Ambient air quality in Package-7 (AQ54–AQ58) showed a clear improvement in Q4-2025 compared to baseline. PM_{10} reduced to 19.50–29.40 µg/m³, remaining within both Bangladesh and IFC limits at all locations. However, $PM_{2.5}$ at AQ56 (46.30 µg/m³), AQ57 (61.60 µg/m³) and AQ58 (57.80

µg/m³) exceeded the IFC guideline value of 25 µg/m³, although still within national standards, while AQ54 and AQ55 complied with IFC limits. All other pollutants were within permissible levels and Pb was BDL at all sites.

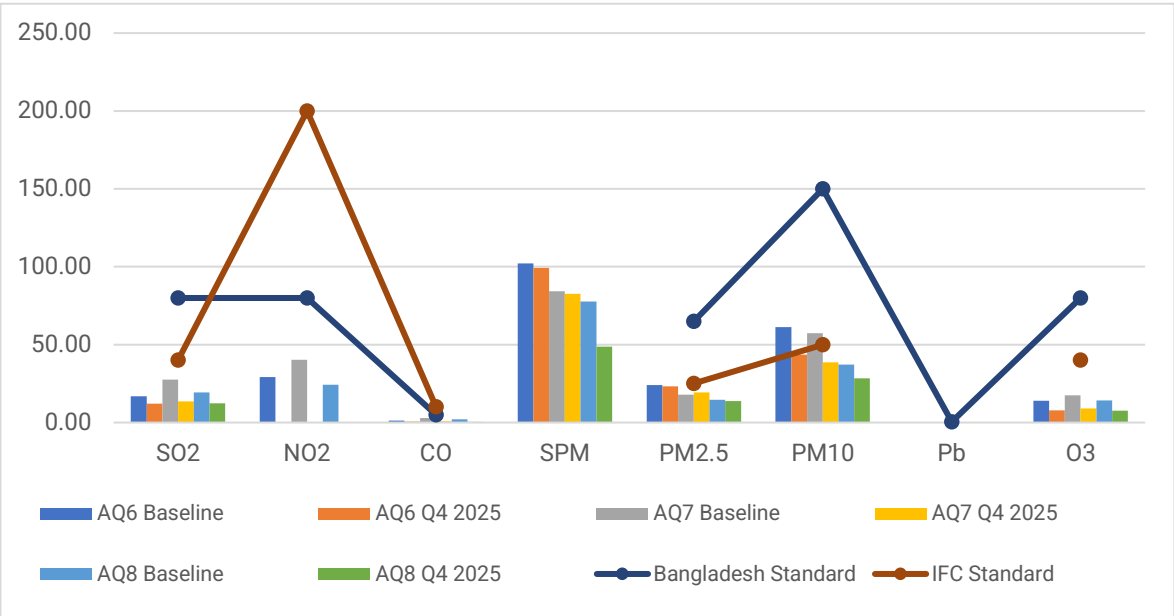
41. During the reporting period, monitoring results at a limited number of locations, particulate matter levels exceeded IFC guideline values while remaining within national standards during the reporting period. In response, site-specific controls were strengthened, including more frequent water sprinkling, covering of stockpiles, traffic management near settlements, and enforcement of vehicle speed limits. Follow-up monitoring has been scheduled for these locations in the next monitoring cycle to confirm the effectiveness of the enhanced mitigation measures and will be reported in the subsequent EMR.

Figure 3-1: Air Quality Analysis Results in Package 1- 7 project locations

Package 1

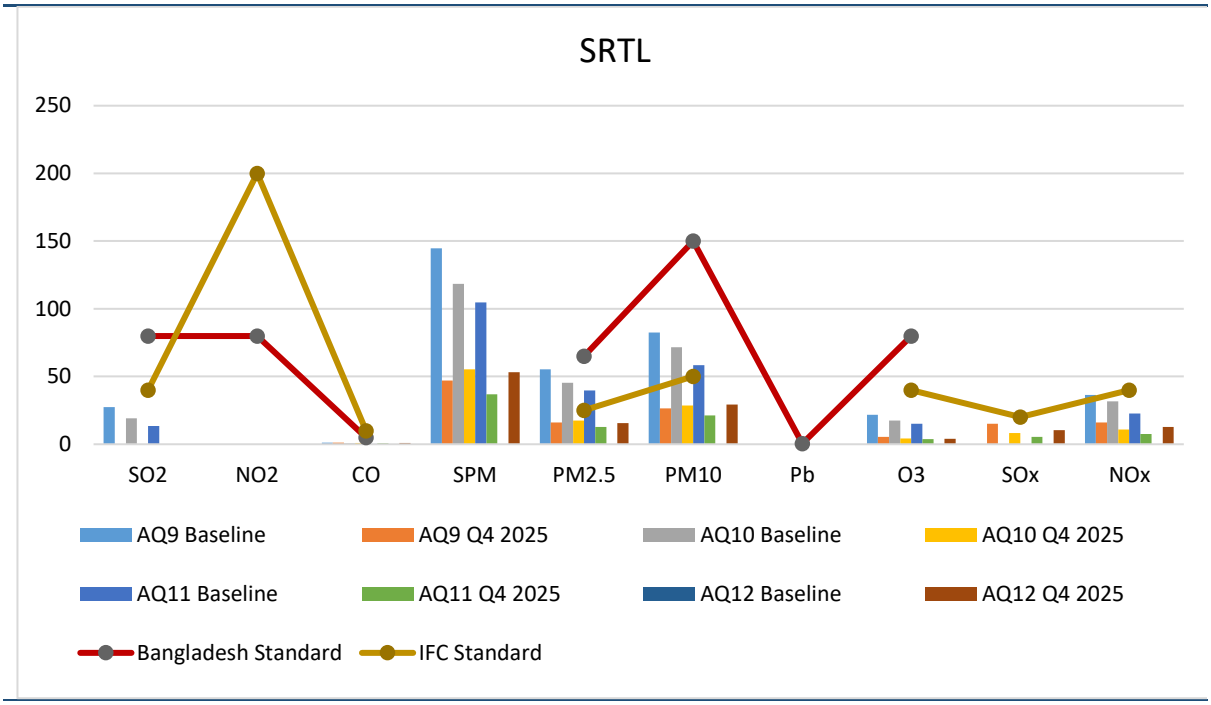


Package 2

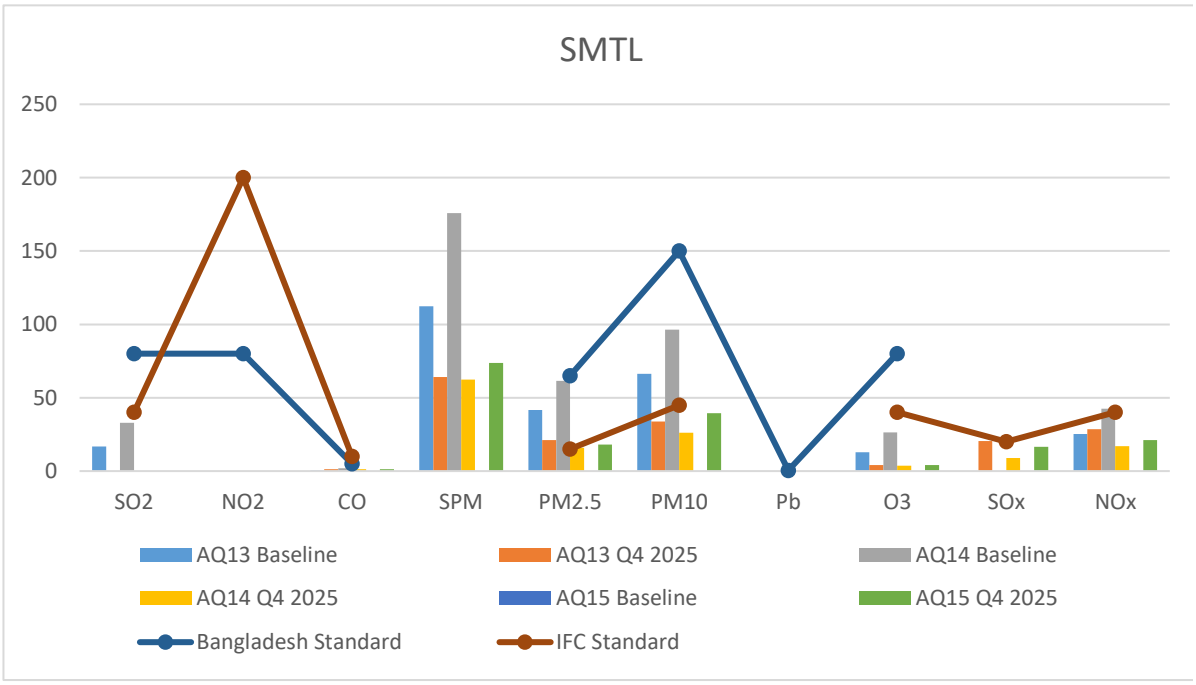


Package 3

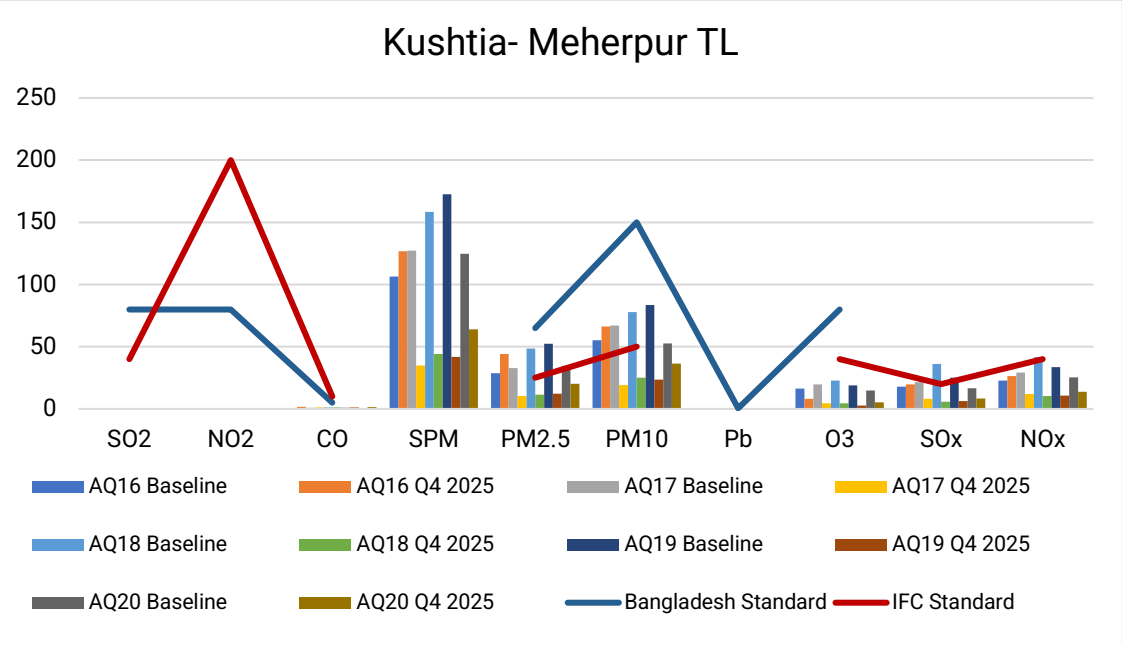
Satkhira- Rupsha TL



Satkhira- Manirampur TL

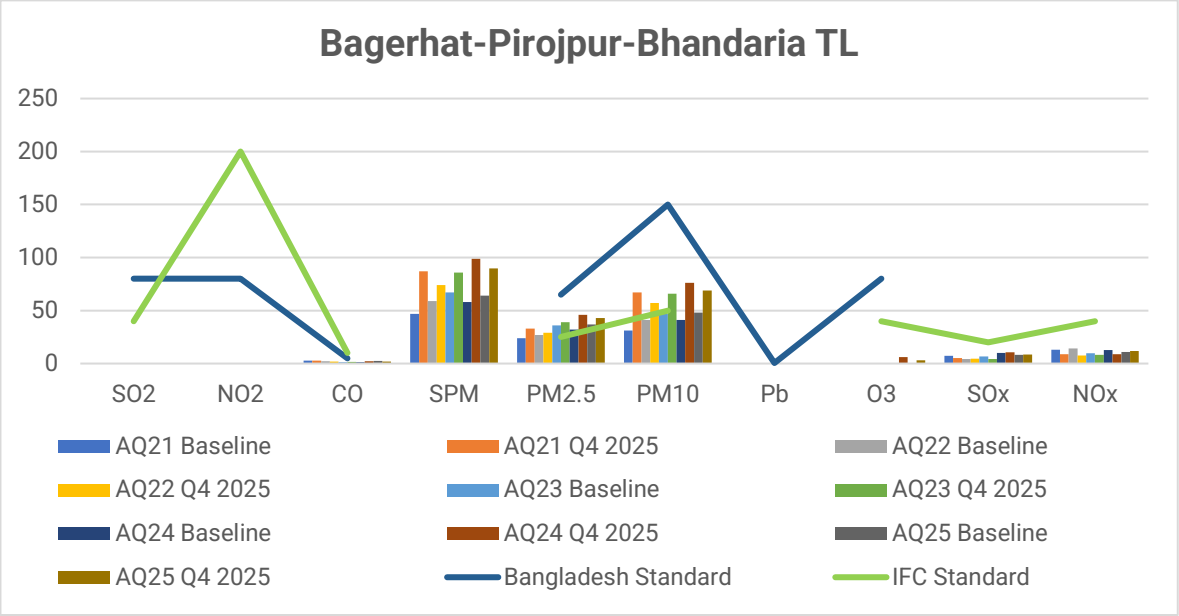


Kushtia- Meherpur TL

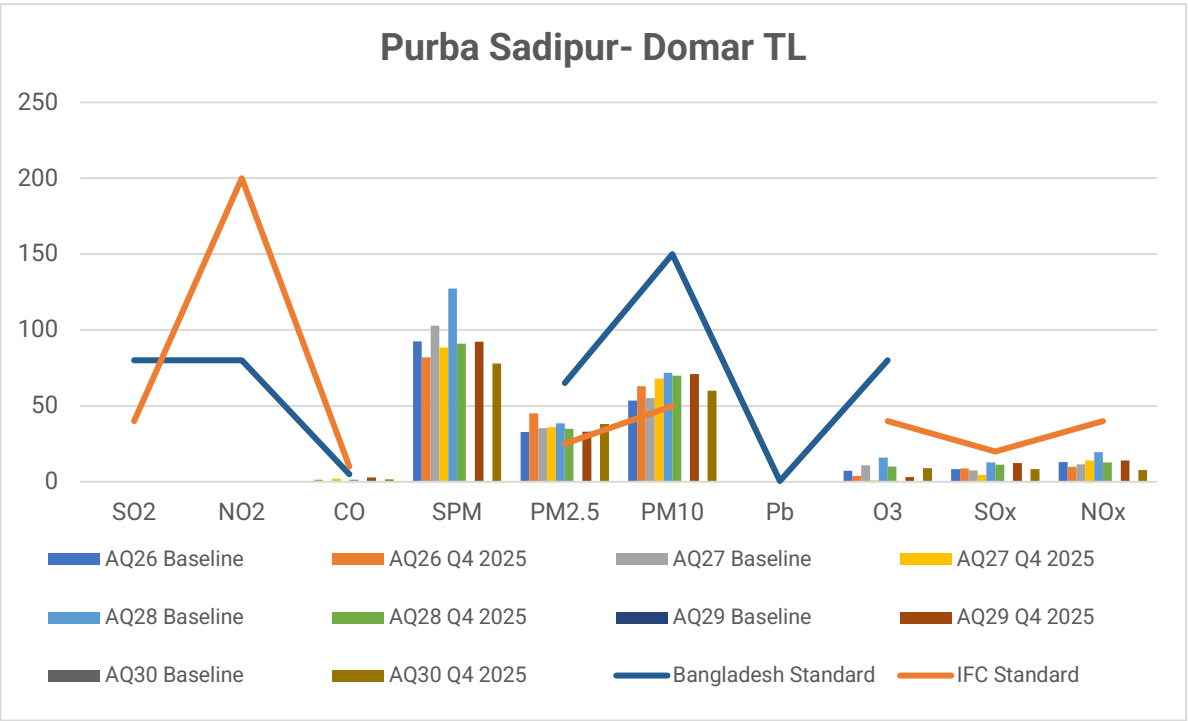

Kushtia- Meherpur TL
250
200
150
100
50
0
SO2
NO2
CO
SPM
PM2.5
PM10
Pb
O3
SOx
NOx
AQ16 Baseline
AQ16 Q4 2025
AQ17 Baseline
AQ17 Q4 2025
AQ18 Baseline
AQ18 Q4 2025
AQ19 Baseline
AQ19 Q4 2025
AQ20 Baseline
AQ20 Q4 2025
Bangladesh Standard
IFC Standard

Package 4

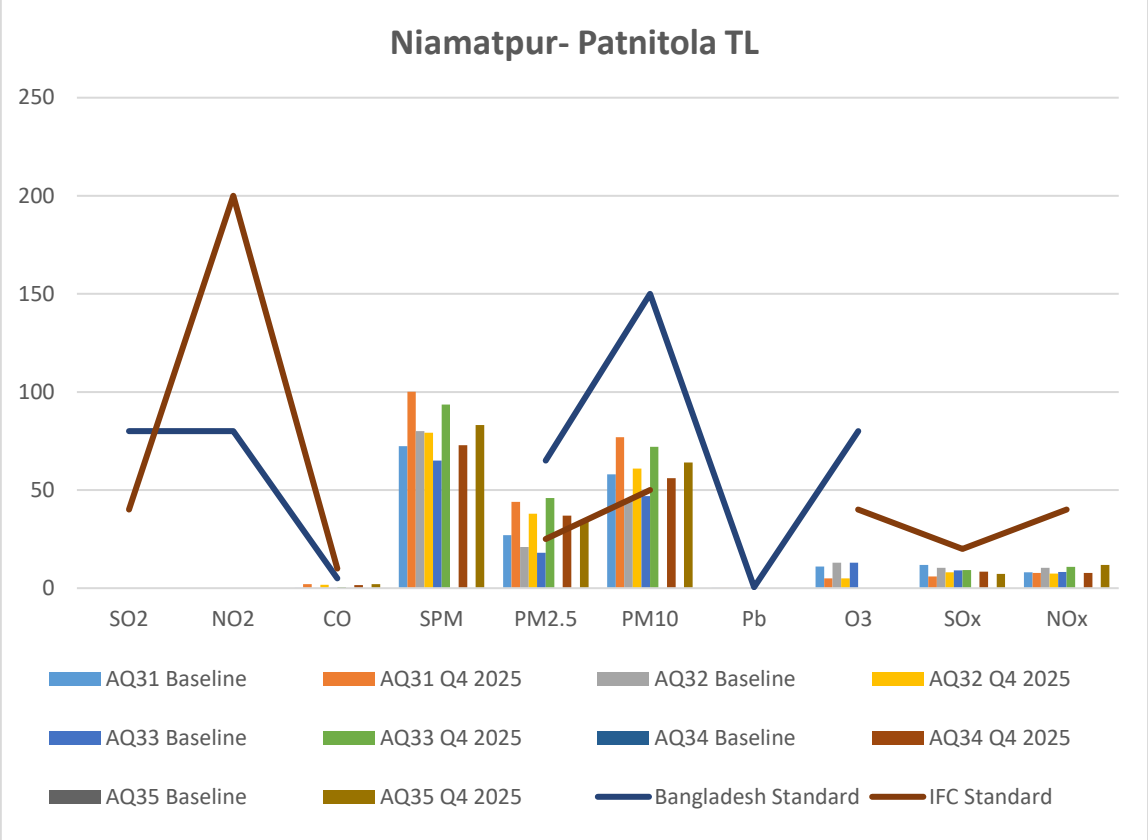
Bagerhat-Pirojpur-Bhandaria TL



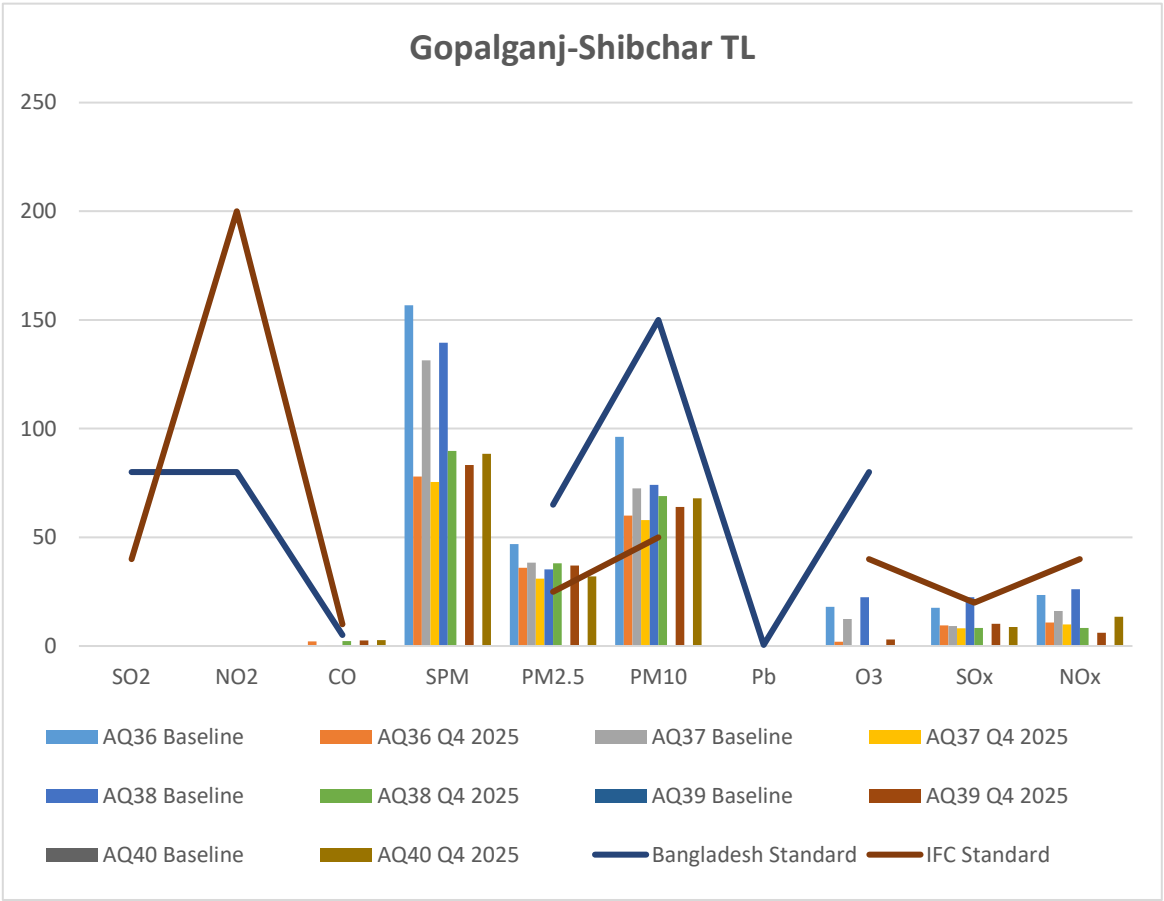
Purba Sadipur- Domar TL



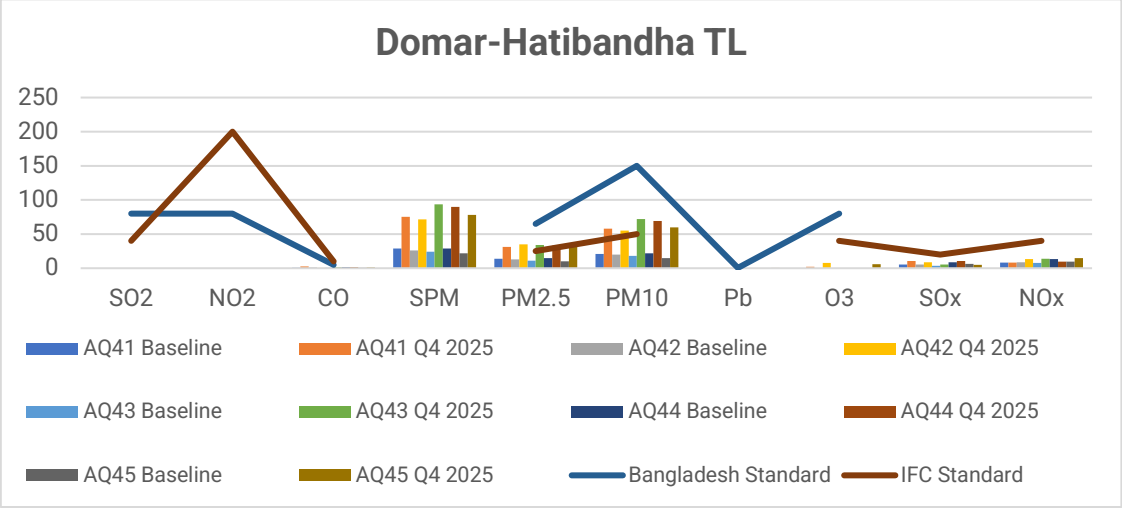
Niamatpur- Patnitola TL



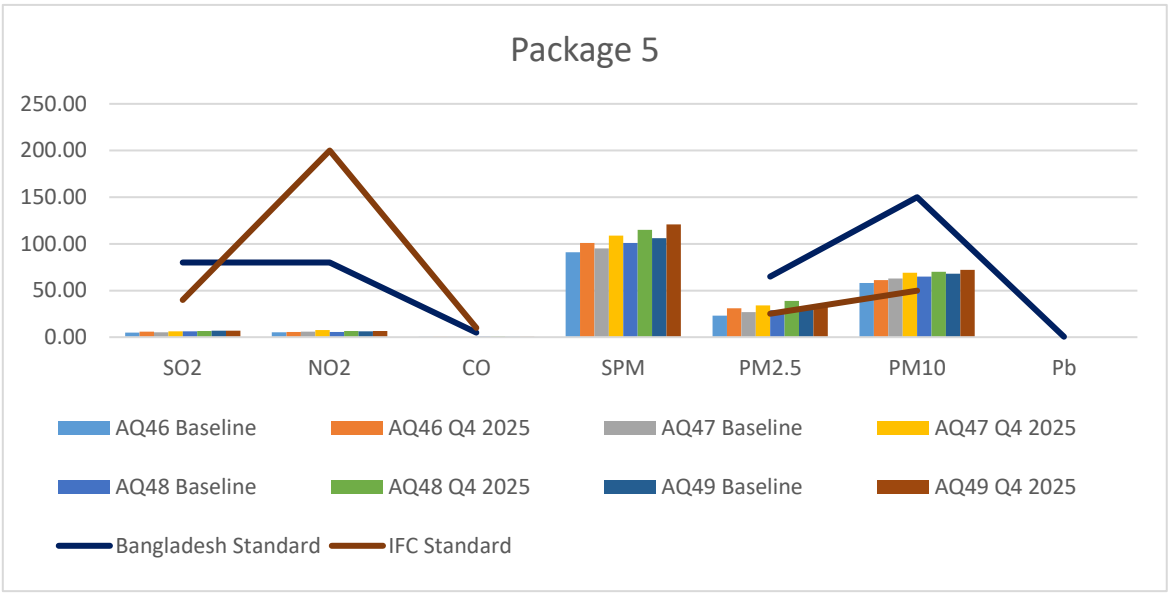
Gopalganj-Shibchar TL



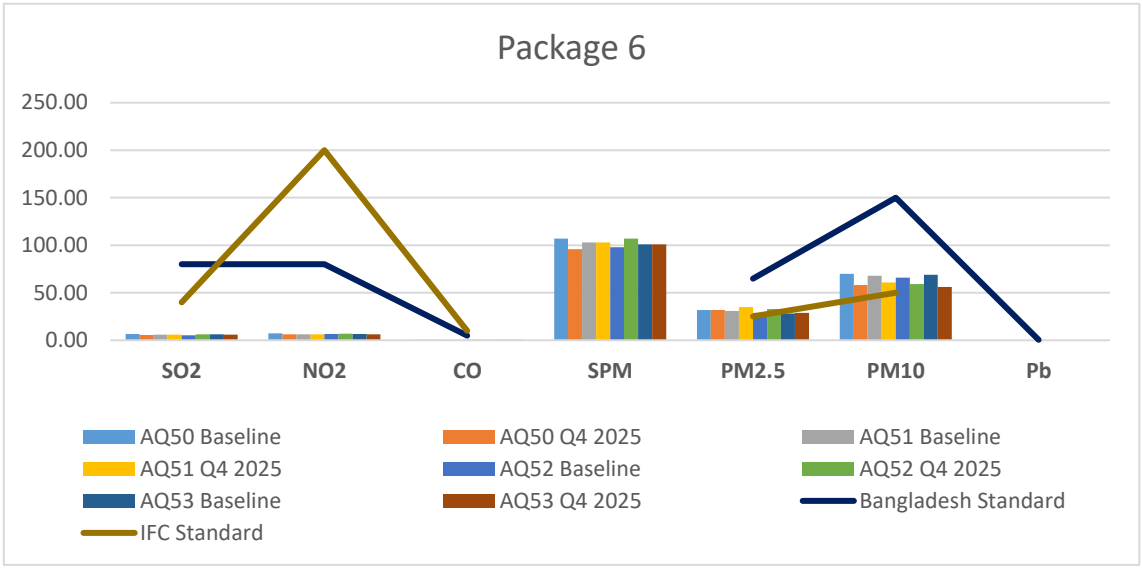
Domar-Hatibandha TL



Package 5



Package 6


Package 6
250.00
200.00
150.00
100.00
50.00
0.00
SO2
NO2
CO
SPM
PM2.5
PM10
Pb
AQ50 Baseline
AQ50 Q4 2025
AQ51 Baseline
AQ51 Q4 2025
AQ52 Baseline
AQ52 Q4 2025
AQ53 Baseline
AQ53 Q4 2025
Bangladesh Standard
IFC Standard

Package 7

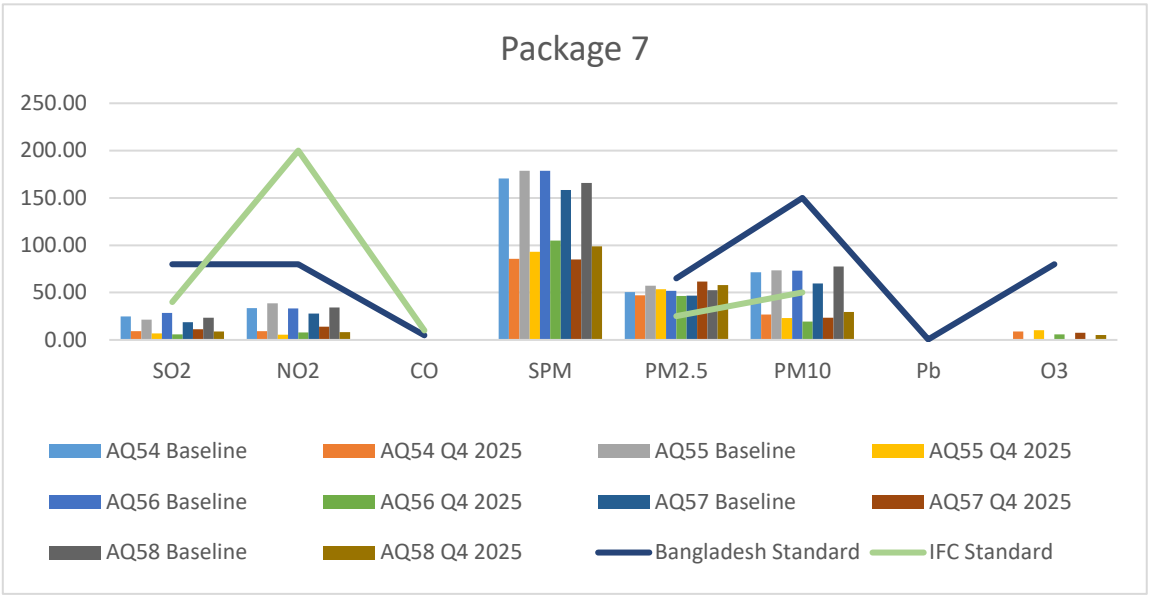

Package 7
250.00
200.00
150.00
100.00
50.00
0.00
SO2
NO2
CO
SPM
PM2.5
PM10
Pb
O3
AQ54 Baseline
AQ54 Q4 2025
AQ55 Baseline
AQ55 Q4 2025
AQ56 Baseline
AQ56 Q4 2025
AQ57 Baseline
AQ57 Q4 2025
AQ58 Baseline
AQ58 Q4 2025
Bangladesh Standard
IFC Standard

Table 3-2: Air Quality Analysis Results in Package 1-7 project locations

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
Package 1												
1	AQ1	Baseline			3.72	87.00	55.00	67.00		30.00	6.2	7.2
		Q4 2025			1.05	74.81	24.78	37.34	BDL	3.48	9.85	13.95
2	AQ2	Baseline			3.80	77.00	59.00	71.00		33.00	6.6	7.3
		Q4 2025			1.15	40.45	11.79	21.52	BDL	3.49	5.96	9.66
3	AQ3	Baseline			3.76	82.00	57.00	81.00		37.00	7.0	6.8
		Q4 2025			1.09	47.19	12.47	23.83	BDL	2.81	6.73	9.65
4	AQ4	Baseline			3.67	74.00	62.00	70.00		30.00	7.1	7.0
		Q4 2025			1.13	41.64	13.83	20.52	BDL	3.57	7.35	11.53
5	AQ5	Baseline			3.62	75.00	59.00	69.00		32.00	6.3	6.9
		Q4 2025			1.30	66.16	18.37	29.77	BDL	2.81	14.75	17.05
Package 2												
Rampura- Bashundhara 132kV Underground Cable Line												
6	AQ6	Baseline	16.82	29.24	1.31	102.19	24.11	61.23	BDL	13.93	-	-
		Q4 2025	12.09	-	0.58	99.26	23.17	43.51	BDL	7.89	-	-
7	AQ7	Baseline	27.49	40.23	2.86	84.25	17.82	57.43	BDL	17.56	-	-
		Q4 2025	13.55	-	0.76	82.63	19.41	38.57	BDL	9.08	-	-
8	AQ8	Baseline	19.26	24.17	2.01	77.63	14.68	37.14	BDL	14.21	-	-
		Q4 2025	12.35	-	0.43	48.71	13.83	28.46	BDL	7.64	-	-
Package 3												
Satkhira- Rupsha TL												
9	AQ9	Baseline	27.5		1.21	144.70	55.30	82.60	BDL	21.80		36.50
		Q4 2025	-	-	1.12	47.16	16.09	26.56	BDL	5.43	15.04	16.18
10	AQ10	Baseline	19.2		0.60	118.50	45.40	71.60	BDL	17.50		31.70

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
		Q4 2025	-	-	0.93	55.33	17.53	28.62	BDL	4.36	8.19	10.80
11	AQ11	Baseline	13.5		0.28	104.80	39.80	58.30	BDL	15.10		22.80
		Q4 2025	-	-	0.81	36.99	12.81	21.28	BDL	3.77	5.38	7.50
12	AQ12	Baseline	-	-								
		Q4 2025	-	-	0.92	53.27	15.50	29.34	BDL	3.93	10.29	12.77
Satkhira- Manirampur TL												
13	AQ13	Baseline	16.7		0.40	112.40	41.60	66.30	BDL	12.90		25.30
		Q4 2025	-	-	1.29	64.11	21.11	33.78	BDL	4.11	20.50	28.48
14	AQ14	Baseline	32.8		1.81	175.80	61.40	96.50	BDL	26.40		42.50
		Q4 2025	-	-	1.21	62.28	15.82	26.22	BDL	3.70	8.95	17.03
15	AQ15	Baseline	-	-								
		Q4 2025	-	-	1.25	73.79	18.12	39.49	BDL	4.21	16.64	21.21
Kushtia- Meherpur TL												
16	AQ16	Baseline	-	-	0.30	106.50	28.60	55.20	BDL***	16.30	17.80	22.70
		Q4 2025	-	-	1.75	126.85	44.07	66.23	BDL	8.23	19.72	26.47
17	AQ17	Baseline	-	-	0.80	127.30	32.80	67.10	BDL***	19.60	21.60	29.30
		Q4 2025	-	-	1.28	34.83	10.47	19.13	BDL	4.59	8.07	11.88
18	AQ18	Baseline	-	-	1.10	158.40	48.50	77.80	BDL***	22.70	36.10	41.60
		Q4 2025	-	-	1.23	44.21	11.51	25.17	BDL	4.63	5.75	10.48
19	AQ19	Baseline	-	-	1.02	172.60	52.40	83.50	BDL***	18.90	25.20	33.50
		Q4 2025	-	-	1.09	41.93	12.34	23.68	BDL	2.81	6.38	10.58
20	AQ20	Baseline	-	-	0.70	124.70	34.60	52.70	BDL***	14.70	16.60	25.40
		Q4 2025	-	-	1.36	64.01	20.20	36.35	BDL	5.36	8.28	13.68
Package 4												
Bagerhat-Pirojpur-Bhandaria TL												
21	AQ21	Baseline	-	-	2.7	47	24	31	0		7.3	13.1

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
		Q4 2025	-	-	2.9	87.1	33	67	0	0	5.1	8.9
22	AQ22	Baseline	-	-	2.1	59	27	41	0		4.2	14.2
		Q4 2025	-	-	1.9	74.1	29	57	0	0	4.6	7.7
23	AQ23	Baseline	-	-	1.3	67	36	47	0		6.8	9.8
		Q4 2025	-	-	1.4	85.8	39	66	0	0	4.2	8.3
24	AQ24	Baseline	-	-	1.1	58	32	41	0	-	10.1	12.6
		Q4 2025	-	-	2.1	98.8	46	76	0.001	6	10.7	8.8
25	AQ25	Baseline	-	-	2.4	64	37	48	0	-	8.3	11
		Q4 2025	-	-	1.9	89.7	43	69	0.003	3	8.6	11.9
Purba Sadipur- Domar TL												
26	AQ26	Baseline	-	-	0.4	92.5	32.8	53.4	BDL	7.2	8.4	12.9
		Q4 2025	-	-	1.3	81.9	45	63	0.004	4	8.7	9.9
27	AQ27	Baseline	-	-	0	102.8	35.4	55.1	BDL	10.9	7.6	11.6
		Q4 2025	-	-	2	88.4	36	68	0	1	4.5	14
28	AQ28	Baseline	-	-	0.01	127.2	38.5	71.8	BDL	15.9	12.8	19.6
		Q4 2025	-	-	1.3	91	35	70	0.005	10	11.3	12.8
29	AQ29	Baseline	-	-	-	-	-	-	-	-	-	-
		Q4 2025	-	-	2.9	92.3	33	71	0.002	3	12.3	14
30	AQ30	Baseline	-	-	-	-	-	-	-	-	-	-
		Q4 2025	-	-	1.5	78	38	60	0.004	9	8.3	7.7
Niamatpur- Patnitola TL												
31	AQ31	Baseline	-	-	0.00	72.40	27.00	58.00	0.01	11.00	11.80	8.10
		Q4 2025	-	-	2.10	100.10	44.00	77.00	0.00	5.00	5.90	7.70
32	AQ32	Baseline	-	-	0.00	80.00	21.00	45.00	0.02	13.00	10.40	10.30
		Q4 2025	-	-	1.80	79.30	38.00	61.00	0.00	5.00	8.10	7.50
33	AQ33	Baseline	-	-	0.00	65.00	18.00	47.00	0.01	13.00	9.10	8.30

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
		Q4 2025	-	-	0.60	93.60	46.00	72.00	0.00	0.00	9.20	10.80
34	AQ34	Baseline	-	-								
		Q4 2025	-	-	1.60	72.80	37.00	56.00	0.00	0.00	8.50	7.70
35	AQ35	Baseline	-	-								
		Q4 2025	-	-	2.00	83.20	34.00	64.00	0.00	0.00	7.30	11.90
Gopalganj-Shibchar TL												
36	AQ36	Baseline	-	-	0.02	156.80	46.90	96.20	BDL	18.10	17.60	23.50
		Q4 2025	-	-	2.10	78.00	36.00	60.00	0.00	2.00	9.50	10.80
37	AQ37	Baseline	-	-	0.01	131.40	38.40	72.50	BDL	12.50	9.20	16.10
		Q4 2025	-	-	0.40	75.40	31.00	58.00	0.00	0.00	8.10	10.00
38	AQ38	Baseline	-	-	0.01	139.50	35.30	74.10	BDL	22.40	22.50	26.20
		Q4 2025	-	-	2.30	89.70	38.00	69.00	0.00	0.00	8.30	8.30
39	AQ39	Baseline	-	-								
		Q4 2025	-	-	2.60	83.20	37.00	64.00	0.00	3.00	10.20	6.10
40	AQ40	Baseline	-	-								
		Q4 2025	-	-	2.70	88.40	32.00	68.00	0.00	0.00	8.80	13.40
Domar-Hatibandha TL												
41	AQ41	Baseline	-	-	0.60	29.00	14.00	21.00	0.00	-	5.20	8.20
		Q4 2025	-	-	2.60	75.40	31.00	58.00	0.00	2.00	10.80	8.20
42	AQ42	Baseline	-	-	1.20	26.00	13.00	20.00	0.00	-	5.50	8.90
		Q4 2025	-	-	0.30	71.50	35.00	55.00	0.00	8.00	8.80	13.40
43	AQ43	Baseline	-	-	0.70	24.00	11.00	18.00	0.00	-	3.40	7.80
		Q4 2025	-	-	1.70	93.60	34.00	72.00	0.00	0.00	5.30	13.90
44	AQ44	Baseline	-	-	1.90	29.00	15.00	22.00	0.00	-	8.80	13.40
		Q4 2025	-	-	1.70	89.70	33.00	69.00	0.00	0.00	10.50	9.70
45	AQ45	Baseline	-	-	0.90	22.00	10.00	15.00	0.00	-	6.20	9.50

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
		Q4 2025	-	-	1.30	78.00	34.00	60.00	0.00	6.00	5.00	14.80
Package 5												
400/230 kV GIS Substation at Kaliganj, Gazipur												
46	AQ46	Baseline	4.90	5.10	0.46	91.00	23.00	58.00	BDL	-	-	-
		Q4 2025	5.90	5.50	0.48	101.00	31.00	61.00	BDL	-	-	-
47	AQ47	Baseline	5.30	6.00	0.51	95.00	27.00	63.00	BDL	-	-	-
		Q4 2025	6.30	7.80	0.55	109.00	34.00	69.00	BDL	-	-	-
48	AQ48	Baseline	6.20	5.70	0.63	101.00	29.00	65.00	BDL	-	-	-
		Q4 2025	6.50	6.60	0.63	115.00	39.00	70.00	BDL	-	-	-
49	AQ49	Baseline	6.80	6.20	0.59	106.00	32.00	68.00	BDL	-	-	-
		Q4 2025	6.80	6.70	0.53	121.00	35.00	72.00	BDL	-	-	-
Package 6												
400/230/132 KV GIS Substation at Purbachal												
50	AQ50	Baseline	6.70	7.20	0.59	107.00	32.00	70.00	BDL	-	-	-
		Q4 2025	5.70	6.30	0.41	96.00	32.00	58.00	BDL	-	-	-
51	AQ51	Baseline	5.90	6.30	0.48	103.00	31.00	68.00	BDL	-	-	-
		Q4 2025	5.90	6.40	0.52	103.00	35.00	61.00	BDL	-	-	-
52	AQ52	Baseline	5.40	6.70	0.51	98.00	29.00	66.00	BDL	-	-	-
		Q4 2025	6.30	6.80	0.54	107.00	33.00	59.00	BDL	-	-	-
53	AQ53	Baseline	6.20	6.60	0.53	101.00	28.00	69.00	BDL	-	-	-
		Q4 2025	5.80	6.20	0.45	101.00	29.00	56.00	BDL	-	-	-
Package 7												
54	AQ54	Baseline	24.70	33.60	0.48	170.70	50.50	71.50	0.03	-	-	-
		Q4 2025	9.10	9.10	0.28	85.80	47.10	26.90	BDL	8.80	-	-
55	AQ55	Baseline	21.40	38.80	0.41	178.60	57.20	73.50	0.04	-	-	-
		Q4 2025	6.90	5.50	0.59	93.20	53.70	23.10	BDL	10.40	-	-

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
56	AQ56	Baseline	28.40	33.40	0.37	178.80	51.70	73.30	0.04	-	-	-
		Q4 2025	5.70	7.90	0.34	104.90	46.30	19.50	BDL	5.90	-	-
57	AQ57	Baseline	18.60	27.90	0.18	158.50	46.70	59.50	0.01	-	-	-
		Q4 2025	11.40	13.90	0.61	85.10	61.60	23.60	BDL	7.50	-	-
58	AQ58	Baseline	23.30	34.40	0.27	165.90	52.50	77.40	0.02	-	-	-
		Q4 2025	8.90	8.20	0.34	98.70	57.80	29.40	BDL	5.10	-	-
Bangladesh Standard[2]			**80**	**80**	**5**	**-**	**65**	**150**	**0.5**	**80**	**-**	**-**
****IFC EHS Standard[3]**			**40**	**200**	**10**	**NA**	**25**	**50**	**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 July- December 2025 (Package 1- 7)
Note: BDL= Below Detection Limit, NA= Not available

[2] Air Pollution (Control) Rules, 2022, Schedule 1: Ambient Air Quality Standards

[3] IFC's General EHS Guidelines (2007)

3.2 Noise Level Quality

3.2.1 Noise Level Monitoring Methods

42. This section identifies the status of the ambient noise level in Package 1, 2, 3, 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[4]		IFC-WHO[5]	
		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.

43. 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

44. 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**.

45. **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 (Leq) values with the use of A-weighting filters in the noise measuring instrument.

Table 3-4: Sensitive Noise Locations and Descriptions of Package 1- 7 locations

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
Package 1					
1	NL1	TT-1/0	23°58'1.116"N 90°33'1.59"E	20.12.2025-21.12.2025	Mixed Area Area

[4] Noise Pollution (Control) Rules, 2025- Schedule 1

[5] 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
2	NL2	T-4/0	23°57'30.075"N 90°33'23.303"E		Silent Area
3	NL3	T-3/0	23°57'9.805"N 90°33'19.510"E		Silent Area
4	NL4	T-2/3	23°56'49.083"N 90°33'25.387"E		Mixed Area
5	NL5	T-2/1	23°56'18.556"N 90°33'33.555"E		Residential Area
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					
6	NL6	Near the Substation Area in Bashundhara Residential area	22°46'58.26"N 89° 5'34.31"E	10.08.2025	Mixed Area
7	NL7	Near United International University (UIU) Mosque	22°57'43.38"N 89°13'48.10"E		Silent Area
8	NL8	Near the Substation Area of Aftabnagar	22°45'16.79"N 89° 6'35.28"E		Mixed Area
9	NL9	Near United International University (UIU)	22°44'7.26"N 89°17'42.39"E		Mixed Area
10	NL10	Near Base Camp Area	22°45'29.16"N 89°36'22.54"E		Mixed Area
11	NL11	Near Aftabnagar	22°34'51.96"N 90° 1'23.77" E		Mixed Area
12	NL12	Near Hospital in Aftabnagar	22°34'54.01"N 90° 1'15.15"E		Silent Area
Package 3					
Satkhira- Rupsha TL					
13	NL13	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	17.12.2025-18.12.2025	Mixed Zone
14	NL14	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E		Mixed Zone
15	NL15	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E		Mixed Zone
16	NL16	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E		Silent Zone
Satkhira- Manirampur TL					
17	NL17	Magura, Satkhira	22.741249 N, 89.091239 E	19.12.2025-20.12.2025	Mixed Zone
18	NL18	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E		Mixed Zone
19	NL19	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E		Residential Zone
Kushtia- Meherpur TL					
20	NL20	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	20.12.2025-21.12.2025	Silent Zone
21	NL21	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E		Residential Zone

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
22	NL22	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E		Silent Zone
23	NL23	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E		Mixed Zone
24	NL24	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E		Silent Zone
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
25	NL25	T-2/0	23°17'5.39"N 90°1'32.03"E	09.11.2025-13.11.2025	Mixed Area
26	NL26	T-4/0	23°17'55.37"N 90°2'29.59"E		
27	NL27	T-5/0	23°18'4.91"N 90°2'57.73"E		
28	NL28	T-15/0	23°19'46.89"N 90°10'35.89"E		
29	NL29	T-17/0	23°21'7.46"N 90°11'4.27"E		
Purba Sadipur- Domar TL					
30	NL30	T-1/0	25°45'12.57"N 88°40'45.99"E	27.11.2025-01.12.2025	Mixed Area
31	NL31	T-8/0	25°51'37.67"N 88°43'50.66"E		
32	NL32	T-16/0	25°57'28.54"N 88°45'29.11"E		
33	NL33	T-20/0	26° 0'26.82"N 88°45'48.31"E		
34	NL34	T-25/0	26° 5'6.73"N 88°47'20.49"E		
Niamatpur- Patnitola TL					
35	NL35	T-3/0	25°47'24.11"N 88°41'21.95"E	21.11.2025-25.11.2025	Mixed Area
36	NL36	T-9/0	25°52'9.21"N 88°45'24.23"E		
37	NL37	T-12/0	25°54'37.92"N 88°45'26.28"E		
38	NL38	T-15/0	25°56'41.08"N 88°45'31.14"E		
39	NL39	T-17/0	25°57'39.67"N 88°45'34.17"E		
Gopalganj-Shibchar TL					
40	NL40	TT-2	23°21'16.19"N 90°11'1.90"E	15.11.2025-19.11.2025	Mixed Area
41	NL41	T-17/0	23°21'7.46"N 90°11'4.27"E		
42	NL42	T-15/0	23°19'46.89"N 90°10'35.89"E		
43	NL43	T-8/0	23°19'18.52"N		

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
			90°4'39.57"E		
44	NL44	T-2/0	23°17'5.39"N 90°1'32.03"E		
Domar-Hatibandha TL					
45	NL45	T-4/0	25°48'31.21"N 88°41'25.45"E	03.12.2025- 07.12.2025	Mixed Area
46	NL46	T-10/0	25°52'46.24"N 88°45'49.71"E		
47	NL47	T-12/0	25°54'37.92"N 88°45'26.28"E		
48	NL48	T-16/0	25°57'28.54"N 88°45'29.11"E		
49	NL49	T-20/0	26° 0'26.82"N 88°45'48.31"E		
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
50	NL50	In front of Hafej Sheikh's House	23.968853 N; 90.549165 E	06-09-2025- 07-09-2025	Residential Area
51	NL51	Located Near Nolir Bridge	23.963585 N; 90.549122 E		Mixed
52	NL52	In front of Mamun Mia's House	23.965680 N; 90.554108 E		Residential Area
53	NL53	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					
54	NL54	In front of Dulal Mia's house	23.864745 N; 90.475689 E	11.08.2025- 12.08.2025	Mixed
55	NL55	In front of Dipak Chakraborty's Shop	23.865882 N; 90.475720 E		Mixed
56	NL56	In front of Badal Mia's house	23.861849 N; 90.476507 E		Residential Area
57	NL57	In front of Mohadev Karmakar's house	23.867743 N; 90.476149 E		Residential Area
Package 7					
58	NL58	Near 132/33 kV GIS substation at Phultola	22°55'20.69"N 89°29'17.39"E	08.09.2025 - 10.09.2025	Mixed
59	NL59	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.62"N 89°37'4.35"E		Mixed
60	NL60	Near 132/33 kV GIS substation at Maheshpur	23°47'28.21"N 88°40'41.77"E		Mixed
61	NL61	Near 132/33 kV GIS substation at Meherpur	23°20'39.31"N 88°55'21.71"E		Mixed
62	NL62	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 July- December 2025 (Package 1- 7)

3.2.3 Analysis Results

46. 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.

47. Ambient noise monitoring for Package-1 was conducted at five locations (NL1–NL5) during the baseline and Q4-2025 periods. The measured day-time (Leqday) and night-time (Leqnight) noise levels at all locations remained within both the Bangladesh Noise Standards and IFC/WHO guideline limits for their respective land-use categories (mixed, silent and residential areas). During Q4-2025, the highest daytime noise level was 55.44 dB(A) at NL1 and the highest nighttime level was 46.27 dB(A), both of which complied with the applicable standards. No exceedance of noise standards was observed at any of the monitoring locations, indicating that construction activities under Package-1 did not cause significant noise disturbance during the reporting period.

48. Ambient noise monitoring for Package-2 was conducted at NL6–NL12 during the baseline and Q4-2025 periods. The recorded day-time and night-time noise levels at all locations remained within the Bangladesh Noise Pollution Control Rules and IFC/WHO guideline limits for their respective land-use categories (mixed and silent areas). During Q4-2025, the highest daytime noise level was 59.21 dB(A) at NL11 and the highest night-time level was 46.58 dB(A) at NL9, both of which complied with the applicable standards. No exceedance of noise standards was observed at any monitoring location, indicating that construction activities under Package-2 did not create unacceptable noise impacts during the reporting period.

49. Ambient noise monitoring for Package-3, covering the Satkhira–Rupsha, Satkhira–Manirampur and Kushtia–Meherpur transmission line corridors, was carried out at NL13–NL24 during the baseline and Q4-2025 periods. The measured day-time and night-time noise levels at all locations were within the Bangladesh Noise Standards and IFC/WHO guideline limits for their respective land-use categories (mixed, silent and residential areas). During Q4-2025, the highest daytime noise level was 63.13 dB(A) at NL17, which remained within the Bangladesh mixed area limit of 60 dB(A) but exceeded the IFC daytime guideline of 55 dB(A), while all other locations complied with both standards. Night-time noise levels remained within both standards at all stations. Overall, noise conditions were acceptable, with only a localized IFC exceedance at NL17 during daytime, and no national standard violations were recorded in Package-3.

50. Ambient noise monitoring for Package-4, covering the Bagerhat–Pirojpur–Bhandaria, Perib–Sadipur–Domar, Nilphamari–Patnitola, Gopalganj–Shibchar and Dhanerhat–Hatibandha transmission line corridors, was conducted at NL25–NL49 during the baseline and Q4-2025 periods. The recorded day-time and night-time noise levels at all monitoring locations remained within both the Bangladesh Noise Pollution Control Rules and IFC/WHO guideline limits for mixed-use areas. During Q4-2025, the highest daytime noise level was about 58.05 dB(A) and the highest nighttime level was about 42.18 dB(A), both of which complied with the applicable standards. No exceedance of noise limits was observed, indicating that construction activities under Package-4 did not cause significant noise disturbance during the reporting period.

51. Ambient noise monitoring for Package-5 was conducted at NL50–NL53 during the baseline and Q4-2025 periods. The recorded day-time and night-time noise levels at all locations remained within both the Bangladesh Noise Standards and IFC/WHO guideline limits for their respective land-use categories (residential and mixed areas). During Q4-2025, the highest daytime noise level was 54.5 dB(A) at NL51, and the highest night-time level was 41.7 dB(A), both of which complied with the applicable standards. No noise exceedance was observed, indicating that construction activities at the Kaliganj 400/230 kV GIS Substation did not cause significant noise impacts during the reporting period.

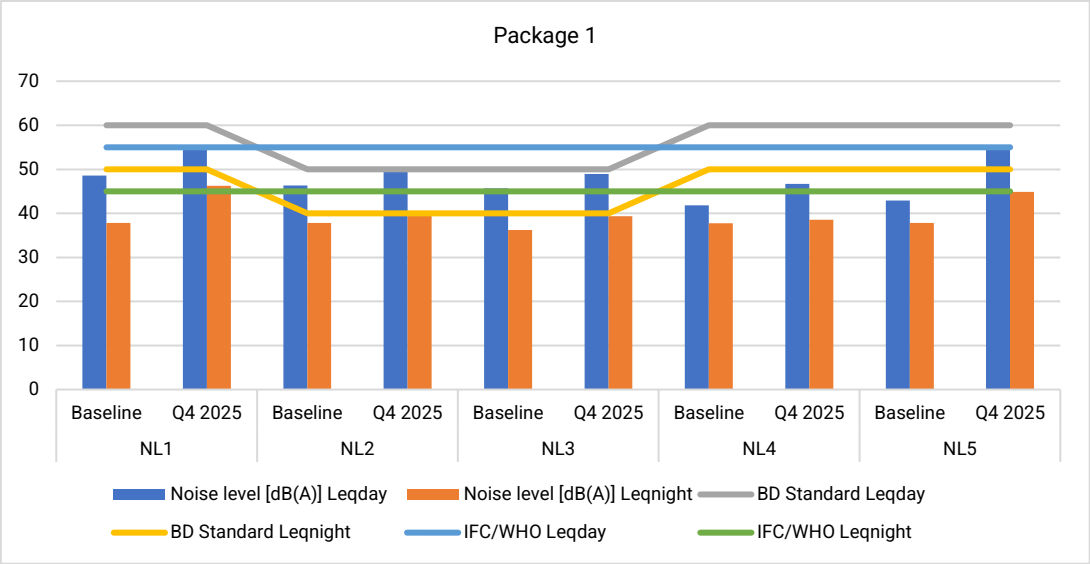
52. Ambient noise monitoring for Package-6 was carried out at NL54–NL57 during the baseline and Q4-2025 periods. The measured day-time and night-time noise levels at all locations remained within the Bangladesh Noise Pollution Control Rules and IFC/WHO guideline limits for both mixed and residential areas. During Q4-2025, the highest daytime noise level was 58.72 dB(A) at NL55, which complied with the Bangladesh mixed area limit (60 dB(A)) but slightly exceeded the IFC daytime guideline (55 dB(A)), while all other locations complied with both standards. Night-time noise levels were within limits at all stations. Overall, noise conditions were acceptable, with only a minor localized IFC exceedance at NL55 during daytime and no national standard violations.

53. Ambient noise monitoring for Package-7 was conducted at NL58–NL62 during the baseline and Q4-2025 periods. The results show a clear improvement in noise levels in Q4-2025 compared to baseline, particularly for daytime noise. During Q4-2025, day-time noise levels ranged from 49.98 to 59.13 dB(A) and night-time levels ranged from 37.47 to 41.11 dB(A), which were within both the Bangladesh Noise Standards and IFC/WHO guideline limits for mixed-use areas. No exceedance of noise standards was observed at any of the monitoring locations, indicating that construction activities in Package-7 did not cause significant noise disturbance during the reporting period.

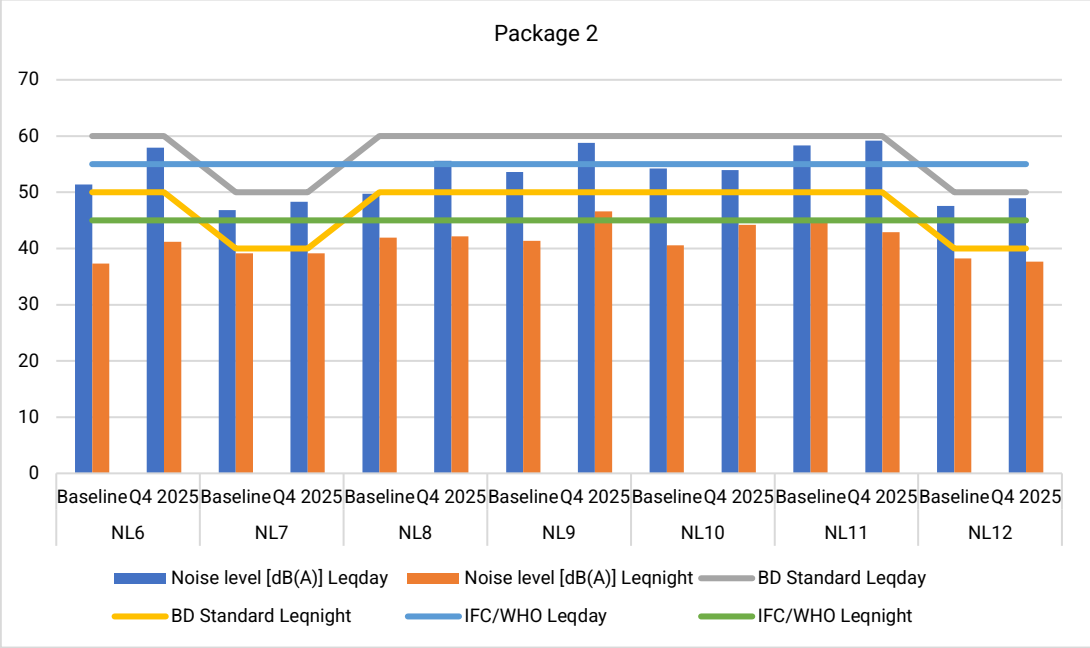
54. Monitoring photographs and lab sheets are attached in Annexure-32: Environmental Monitoring Pictures and Annexure-33: Environmental Monitoring Lab Sheet.

Figure 3-2: Noise Monitoring Level of Package 1- 7 locations

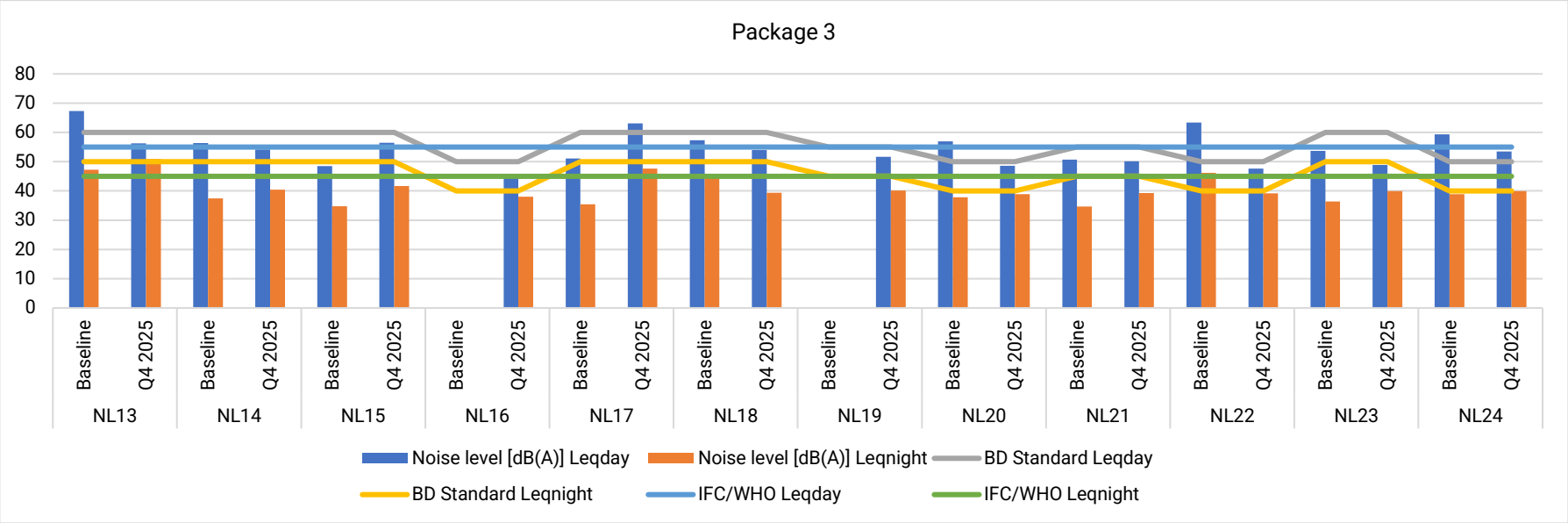
Package 1



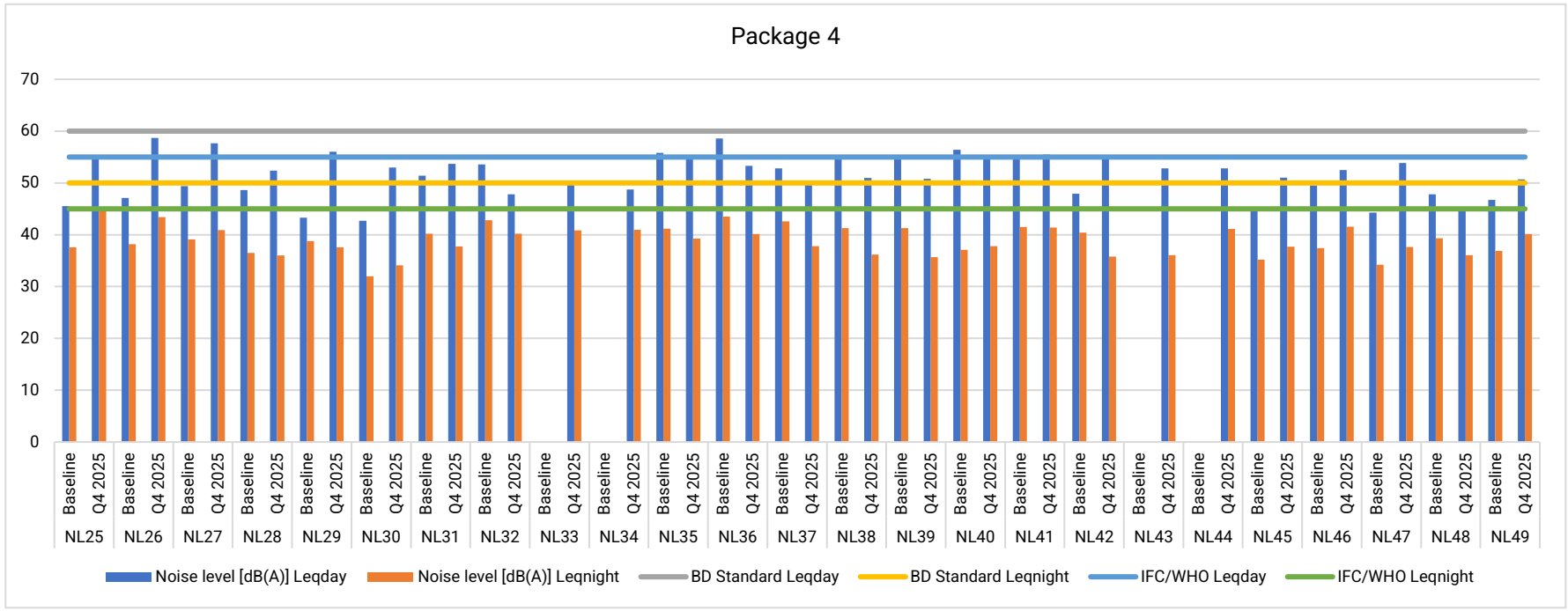
Package 2



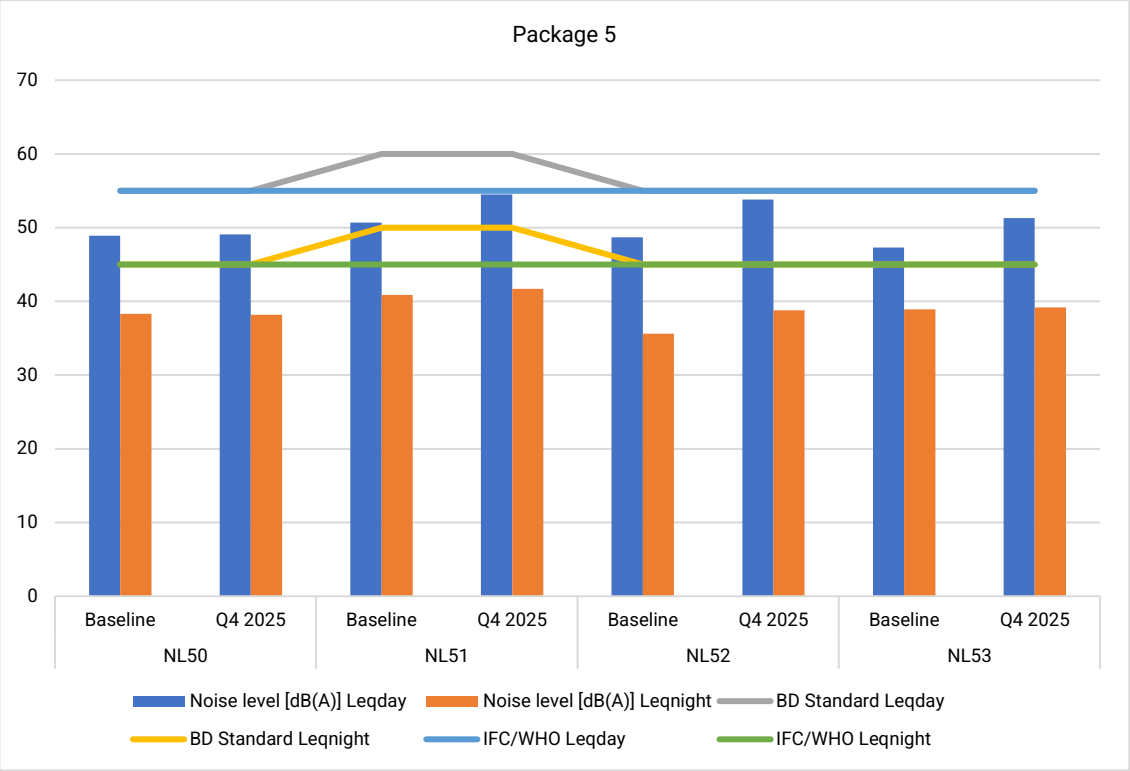
Package 3



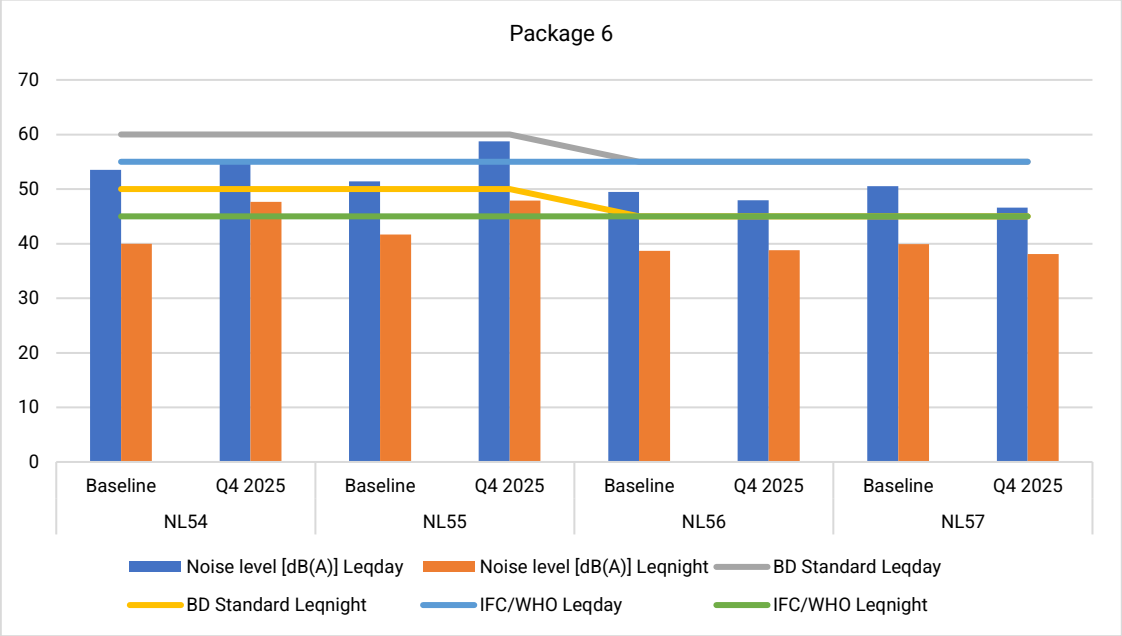
Package 4


Package 4
70
60
50
40
30
20
10
0
Baseline
Q4 2025
NL25
NL26
NL27
NL28
NL29
NL30
NL31
NL32
NL33
NL34
NL35
NL36
NL37
NL38
NL39
NL40
NL41
NL42
NL43
NL44
NL45
NL46
NL47
NL48
NL49
Noise level [dB(A)] Leqday
Noise level [dB(A)] Leqnight
BD Standard Leqday
BD Standard Leqnight
IFC/WHO Leqday
IFC/WHO Leqnight

Package 5



Package 6



Package 7

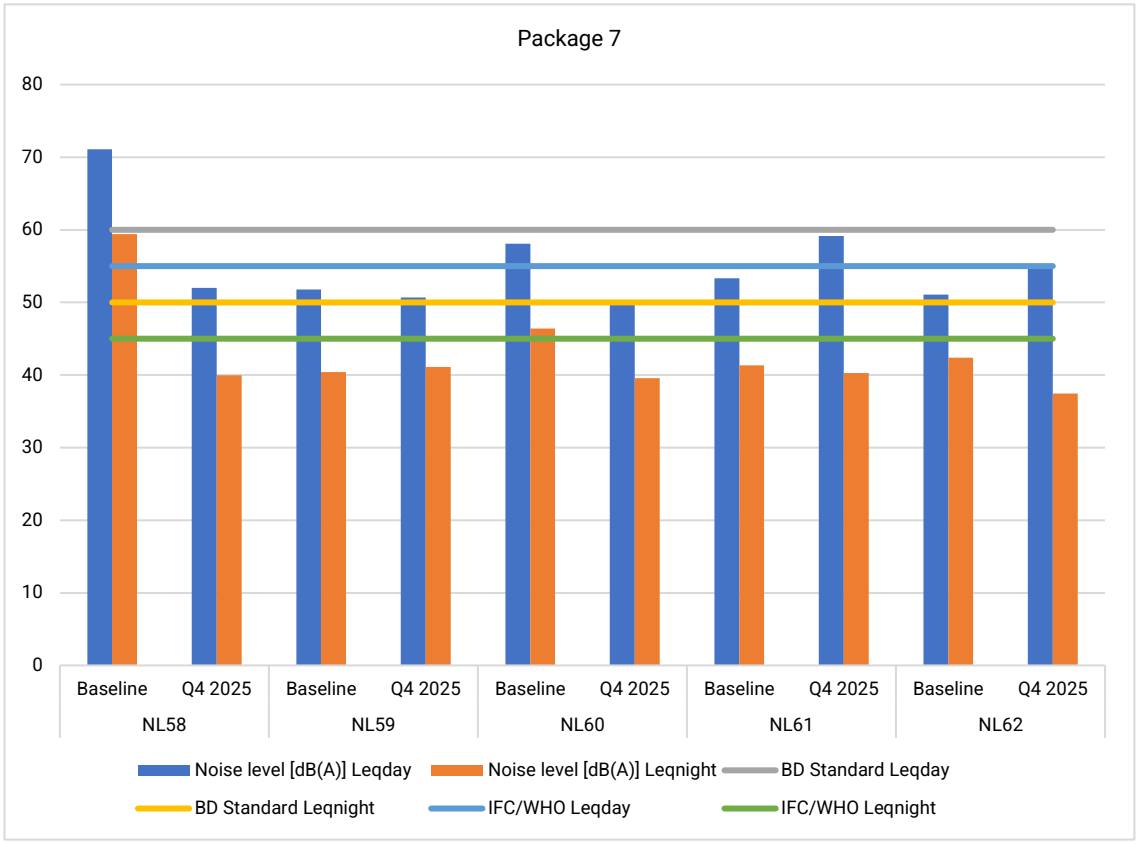

Package 7
80
70
60
50
40
30
20
10
0
Baseline
Q4 2025
NL58
NL59
NL60
NL61
NL62
Noise level [dB(A)] Leqday
Noise level [dB(A)] Leqnight
BD Standard Leqday
BD Standard Leqnight
IFC/WHO Leqday
IFC/WHO Leqnight

Table 3-5: Noise Monitoring Level of Package 1- 7 locations

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
Package 1									
1	NL1	Baseline	48.59	37.8	60	50	55	45	Mixed Area
		Q4 2025	55.44	46.27	60	50	55	45	Mixed Area
2	NL2	Baseline	46.3	37.84	50	40	55	45	Silent Area
		Q4 2025	49.47	39.4	50	40	55	45	Silent Area
3	NL3	Baseline	45.71	36.23	50	40	55	45	Silent Area
		Q4 2025	48.96	39.38	50	40	55	45	Silent Area
4	NL4	Baseline	41.86	37.77	60	50	55	45	Mixed Area
		Q4 2025	46.72	38.57	60	50	55	45	Mixed Area
5	NL5	Baseline	42.95	37.86	60	50	55	45	Residential Area
		Q4 2025	54.57	44.89	60	50	55	45	Residential Area
Package 2									
Rampura- Bashundhara 132kV Underground Cable Line									
6	NL6	Baseline	51.38	37.34	60	50	55	45	Mixed Area
		Q4 2025	57.91	41.18	60	50	55	45	Mixed Area
7	NL7	Baseline	46.82	39.13	50	40	55	45	Silent Area
		Q4 2025	48.31	39.14	50	40	55	45	Silent Area
8	NL8	Baseline	49.73	41.92	60	50	55	45	Mixed Area
		Q4 2025	55.62	42.18	60	50	55	45	Mixed Area
9	NL9	Baseline	53.62	41.34	60	50	55	45	Mixed Area
		Q4 2025	58.79	46.58	60	50	55	45	Mixed Area
10	NL10	Baseline	54.25	40.57	60	50	55	45	Mixed Area

[6] Noise Pollution (Control) Rules, 2025, Schedule 1: Area-wise Noise Standards.

[7] 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[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
		Q4 2025	53.96	44.19	60	50	55	45	Mixed Area
11	NL11	Baseline	58.35	45.39	60	50	55	45	Mixed Area
		Q4 2025	59.21	42.88	60	50	55	45	Mixed Area
12	NL12	Baseline	47.56	38.25	50	40	55	45	Silent Area
		Q4 2025	48.95	37.65	50	40	55	45	Silent Area
Package 3									
Satkhira- Rupsha TL									
13	NL13	Baseline	67.3	47.2	60	50	55	45	Mixed Area
		Q4 2025	56.31	50.88	60	50	55	45	Mixed Area
14	NL14	Baseline	56.4	37.5	60	50	55	45	Mixed Area
		Q4 2025	54.12	40.4	60	50	55	45	Mixed Area
15	NL15	Baseline	48.5	34.8	60	50	55	45	Mixed Area
		Q4 2025	56.51	41.7	60	50	55	45	Mixed Area
16	NL16	Baseline			50	40	55	45	Silent Area
		Q4 2025	44.6	38.01	50	40	55	45	Silent Area
Satkhira- Manirampur TL									
17	NL17	Baseline	51.1	35.4	60	50	55	45	Mixed Area
		Q4 2025	63.13	47.61	60	50	55	45	Mixed Area
18	NL18	Baseline	57.3	45.7	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
		Q4 2025	53.98	39.4	60	50	55	45	Mixed Area
19	NL19	Baseline			55	45	55	45	Residential Area
		Q4 2025	51.71	40.18	55	45	55	45	Residential Area
Kushtia- Meherpur TL									
20	NL20	Baseline	56.9	37.8	50	40	55	45	Silent Area
		Q4 2025	48.63	38.94	50	40	55	45	Silent Area
21	NL21	Baseline	50.7	34.7	55	45	55	45	Residential Area
		Q4 2025	50.17	39.24	55	45	55	45	Residential Area
22	NL22	Baseline	63.4	46.2	50	40	55	45	Silent Area
		Q4 2025	47.61	39.2	50	40	55	45	Silent Area
23	NL23	Baseline	53.7	36.4	60	50	55	45	Mixed Area
		Q4 2025	48.84	39.96	60	50	55	45	Mixed Area
24	NL24	Baseline	59.3	38.9	50	40	55	45	Silent Area
		Q4 2025	53.47	39.91	50	40	55	45	Silent Area
Package 4									
Bagerhat-Pirojpur-Bhandaria TL									
25	NL25	Baseline	45.5	37.6	60	50	55	45	Mixed Area
		Q4 2025	54.89	44.6	60	50	55	45	Mixed Area
26	NL26	Baseline	47.1	38.2	60	50	55	45	Mixed Area
		Q4 2025	58.68	43.38	60	50	55	45	Mixed Area
27	NL27	Baseline	49.4	39.1	60	50	55	45	Mixed Area
		Q4 2025	57.67	40.9	60	50	55	45	Mixed Area
28	NL28	Baseline	48.6	36.5	60	50	55	45	Mixed Area
		Q4 2025	52.4	35.99	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
29	NL29	Baseline	43.3	38.8	60	50	55	45	Mixed Area
		Q4 2025	56.01	37.6	60	50	55	45	Mixed Area
Purba Sadipur- Domar TL									
30	NL30	Baseline	42.7	32	60	50	55	45	Mixed Area
		Q4 2025	52.97	34.09	60	50	55	45	Mixed Area
31	NL31	Baseline	51.4	40.2	60	50	55	45	Mixed Area
		Q4 2025	53.7	37.74	60	50	55	45	Mixed Area
32	NL32	Baseline	53.6	42.8	60	50	55	45	Mixed Area
		Q4 2025	47.79	40.17	60	50	55	45	Mixed Area
33	NL33	Baseline			60	50	55	45	Mixed Area
		Q4 2025	49.75	40.85	60	50	55	45	Mixed Area
34	NL34	Baseline			60	50	55	45	Mixed Area
		Q4 2025	48.72	40.95	60	50	55	45	Mixed Area
Niamatpur- Patnitola TL									
35	NL35	Baseline	55.8	41.2	60	50	55	45	Mixed Area
		Q4 2025	55.05	39.25	60	50	55	45	Mixed Area
36	NL36	Baseline	58.6	43.5	60	50	55	45	Mixed Area
		Q4 2025	53.29	40.16	60	50	55	45	Mixed Area
37	NL37	Baseline	52.8	42.6	60	50	55	45	Mixed Area
		Q4 2025	49.96	37.8	60	50	55	45	Mixed Area
38	NL38	Baseline	55.2	41.3	60	50	55	45	Mixed Area
		Q4 2025	50.96	36.19	60	50	55	45	Mixed Area
39	NL39	Baseline	54.6	41.3	60	50	55	45	Mixed Area
		Q4 2025	50.8	35.66	60	50	55	45	Mixed Area
Gopalganj-Shibchar TL									
40	NL40	Baseline	56.4	37.1	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
		Q4 2025	55.15	37.81	60	50	55	45	Mixed Area
41	NL41	Baseline	54.7	41.5	60	50	55	45	Mixed Area
		Q4 2025	55.49	41.4	60	50	55	45	Mixed Area
42	NL42	Baseline	47.9	40.4	60	50	55	45	Mixed Area
		Q4 2025	54.65	35.81	60	50	55	45	Mixed Area
43	NL43	Baseline			60	50	55	45	Mixed Area
		Q4 2025	52.83	36.07	60	50	55	45	Mixed Area
44	NL44	Baseline			60	50	55	45	Mixed Area
		Q4 2025	52.82	41.12	60	50	55	45	Mixed Area
Domar-Hatibandha TL									
45	NL45	Baseline	45.3	35.2	60	50	55	45	Mixed Area
		Q4 2025	51.03	37.69	60	50	55	45	Mixed Area
46	NL46	Baseline	49.5	37.4	60	50	55	45	Mixed Area
		Q4 2025	52.51	41.56	60	50	55	45	Mixed Area
47	NL47	Baseline	44.3	34.2	60	50	55	45	Mixed Area
		Q4 2025	53.82	37.66	60	50	55	45	Mixed Area
48	NL48	Baseline	47.8	39.3	60	50	55	45	Mixed Area
		Q4 2025	45.3	36.07	60	50	55	45	Mixed Area
49	NL49	Baseline	46.7	36.9	60	50	55	45	Mixed Area
		Q4 2025	50.67	40.16	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
Package 5									
400/230 kV GIS Substation at Kaliganj, Gazipur									
50	NL50	Baseline	48.9	38.3	55	45	55	45	Residential Area
		Q4 2025	49.1	38.2	55	45	55	45	
51	NL51	Baseline	50.71	40.88	60	50	55	45	Mixed Area
		Q4 2025	54.5	41.7	60	50	55	45	
52	NL52	Baseline	48.7	35.6	55	45	55	45	Residential Area
		Q4 2025	53.8	38.8	55	45	55	45	
53	NL53	Baseline	47.3	38.9	55	45	55	45	Residential Area
		Q4 2025	51.3	39.2	55	45	55	45	
Package 6									
400/230/132 KV GIS Substation at Purbachal									
54	NL54	Baseline	53.52	39.95	60	50	55	45	Mixed Area
		Q4 2025	55.27	47.68	60	50	55	45	
55	NL55	Baseline	51.39	41.66	60	50	55	45	Mixed Area
		Q4 2025	58.72	47.89	60	50	55	45	
56	NL56	Baseline	49.47	38.71	55	45	55	45	Residential Area
		Q4 2025	47.95	38.77	55	45	55	45	
57	NL57	Baseline	50.54	39.92	55	45	55	45	Residential Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[6]		IFC/WHO Standard[7]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
		Q4 2025	46.61	38.11	55	45	55	45	
Package 7									
58	NL58	Baseline	71.08	59.41	60	50	55	45	Mixed Area
		Q4 2025	52.01	39.97	60	50	55	45	
59	NL59	Baseline	51.8	40.41	60	50	55	45	Mixed Area
		Q4 2025	50.69	41.11	60	50	55	45	
60	NL60	Baseline	58.08	46.41	60	50	55	45	Mixed Area
		Q4 2025	49.98	39.58	60	50	55	45	
61	NL61	Baseline	53.32	41.34	60	50	55	45	Mixed Area
		Q4 2025	59.13	40.29	60	50	55	45	
62	NL62	Baseline	51.08	42.41	60	50	55	45	Mixed Area
		Q4 2025	55.11	37.47					

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 7)

3.3 Water Quality

3.3.1 Surface Water

3.3.1.1 Surface Water Sampling Methods

55. 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.

56. 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.

57. 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 wear 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].

58. 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

59. Samples were collected from the center of the water body approximately 0.5m below the water surface. Location of sample collection is 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 1- 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
Package 1					
1.	SW1	Near T-1/0	23°57'59.0162"N 90°32'58.406"E	Pond	20.12.2025-21.12.2025
2.	SW2	Near T-4/0	23°57’27.384”N 90°33’22.473”E		
3.	SW3	Near T-3/0	23°57’23.334”N 90°33’16.017”E		
4.	SW4	Near T-2/3	23°57’24.26”N 90°32’59.558”E		
5.	SW5	Near T-2/1	23°56’15.322”N 90°33’38.667”E		
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					
6.	SW6	Canal, Near Bashundhara L Block	23.81481N 90.43594E	Canal	10.08.2025

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
7.	SW7	Canal, Near UIU	23.80095N 90.44898E	Canal	
8.	SW8	Canal, Near Aftabnagar Steel Bridge	23.76581N 90.43807E	Canal	
Package 3					
Satkhira- Rupsha TL					
9.	SW9	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	Pond	17.12.2025-18.12.2025
10.	SW10	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	Canal	
11.	SW11	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	Pond	
12.	SW12	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	Pond	
Satkhira- Manirampur TL					
13.	SW13	Magura, Satkhira	22.741249 N, 89.091239 E	Pond	19.12.2025-20.12.2025
14.	SW14	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	Pond	
15.	SW15	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	Canal	
Kushtia- Meherpur TL					
16.	SW16	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	Canal	20.12.2025-21.12.2025
17.	SW17	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	Pond	
18.	SW18	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	Pond	
19.	SW19	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	Pond	
20.	SW20	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	Canal	
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
21.	SW21	T-2/4	22°38’18.04”N 89°49’12.79”E	Khal	03.05.2025
Purba Sadipur- Domar TL					
22.	SW22	AP-12	25°54’39”N 88°45’25”E	Pond	21.05.2025
Niamatpur- Patnitola TL					
23.	SW23	Chatara Bazar, Niamatpur	24°53’37.28”N 88°38’42.44”E	Pond	15.05.2025
Gopalganj-Shibchar TL					
24.	SW24	Near AP-01	23°16’29.41”N 90° 00’49.72”E	Cannel	09.05.2025
Domar-Hatibandha TL					

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
25.	SW25	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					
26.	SW26	Nolir Khal	23.966951 N; 90.552715 E	Canal	06-09-2025-07-09-2025
27.	SW27	Nolir Khal	23.965599 N; 90.551005 E		
28.	SW28	Nolir Khal	23.966207 N; 90.549402 E		
29.	SW29	Nolir Khal	23.966470 N; 90.548220 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
30.	SW30	Khal Beside Dulal, Mia's	23.864318 N; 90.475926 E	Canal	12.08.2025
31.	SW31	Tongi Khal	23.863404 N; 90.474864 E		
32.	SW32	Tongi Khal	23.862593 N; 90.476197 E		
33.	SW33	Tongi Khal	23.862223 N; 90.475782 E		
Package 7					
34.	SW34	Near 132/33 kV GIS substation at Phultola	22°55'29.16"N 89°29'9.87"E	Pond	08.09.2025-10.09.2025
35.	SW35	Near 230/132/33 kV GIS substation at Rupsha	22°46'12.99"N 89°36'38.13"E	River	
36.	SW36	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E	Canal	
37.	SW37	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E	Pond	
38.	SW38	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 July- December 2025 (Package 1- 7)

3.3.1.3 Result Analysis

60. 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: Environmental Monitoring Pictures and Annexure-33: Environmental Monitoring Lab Sheet.

61. Surface water quality monitoring was conducted at representative ponds, canals and rivers adjacent to the project corridors and substation sites during July- December 2025. Samples were collected from the center of each water body and analyzed for key parameters including BOD, COD, DO, pH, turbidity, TDS, TSS, nutrients and coliform, and the results were compared against the Bangladesh Environment Conservation Rules (ECR), 2023 – Schedule 2(A) for inland surface water.

62. Surface water quality in Package-1 was monitored at SW1–SW5 during Q4-2025. During this period, BOD (8.5–18.6 mg/L) and COD (38–96 mg/L) at all locations exceeded the applicable limits under the Bangladesh ECR-2023 (BOD ≤6 mg/L, COD ≤50 mg/L), indicating elevated organic loading in nearby water bodies. Dissolved Oxygen (DO) ranged from 3.1 to 5.6 mg/L, with SW2 and SW3 meeting or approaching the 5 mg/L criterion, while SW4 and SW5 remained below the standard. Total coliform concentrations (249–598 n/100 ml) were within the national limit of 5,000 n/100 ml. Other parameters, including pH (7.2–7.9) and TDS (420–680 mg/L), complied with standards; however, TSS (120–410 mg/L), turbidity (19–165 mg/L), and oil and grease (1.2–3.1 mg/L) were elevated at several stations. Overall, surface water quality in Package-1 during Q4-2025 showed partial non-compliance, mainly due to high BOD, COD, suspended solids, and oil and grease, suggesting influences from construction-related runoff and surrounding land-use activities rather than direct project effluent discharges.

63. Surface water quality in Package-2 was monitored at SW6, SW7 and SW8 during the baseline and Q4-2025 periods. In Q4-2025, BOD (13–17 mg/L) and COD (56–74 mg/L) at all three locations exceeded the Bangladesh ECR-2023 limits (BOD ≤6 mg/L, COD ≤50 mg/L), indicating continued organic pollution in nearby water bodies. Dissolved Oxygen (DO) remained below the standard of 5 mg/L at SW7 (4.4 mg/L) and SW8 (3.1 mg/L), while SW6 showed slight improvement (4.9 mg/L) but was still marginally below the standard. Total coliform counts (101–116 n/100 ml) exceeded the allowable limit at all stations, indicating microbiological contamination. Other parameters including pH (6.8–7.2), TDS, TSS and turbidity remained within acceptable limits. Overall, surface water quality in Package-2 remained non-compliant during Q4-2025, mainly due to high BOD, COD, low DO and elevated coliform, suggesting impacts from urban wastewater and runoff rather than direct project discharges.

64. Surface water quality in Package-3, covering the Satkhira–Rupsha, Satkhira–Manirampur and Kushtia–Meherpur transmission line corridors, was monitored at SW9–SW20 during the baseline and Q4-2025 periods. The results show that pH (6.8–8.0) and TDS remained within acceptable limits at all locations; however, BOD (4.45–9.01 mg/L) and COD (32–67 mg/L) in Q4-2025 exceeded the Bangladesh ECR-2023 limits (BOD ≤6 mg/L, COD ≤50 mg/L) at several stations, particularly SW10, SW12, SW13, SW15, SW18, SW19 and SW20. Dissolved oxygen (DO) remained around or slightly above 5 mg/L at most sites but was marginally low at SW13 (4.99 mg/L). Total coliform levels were high at multiple locations (SW10, SW11, SW12, SW16, SW18 and SW19), indicating microbiological contamination. Overall, while general water chemistry remained acceptable, surface water quality in Package-3 showed localized non-compliance due to elevated BOD, COD and coliform, mainly influenced by surrounding domestic and agricultural discharges rather than project activities.

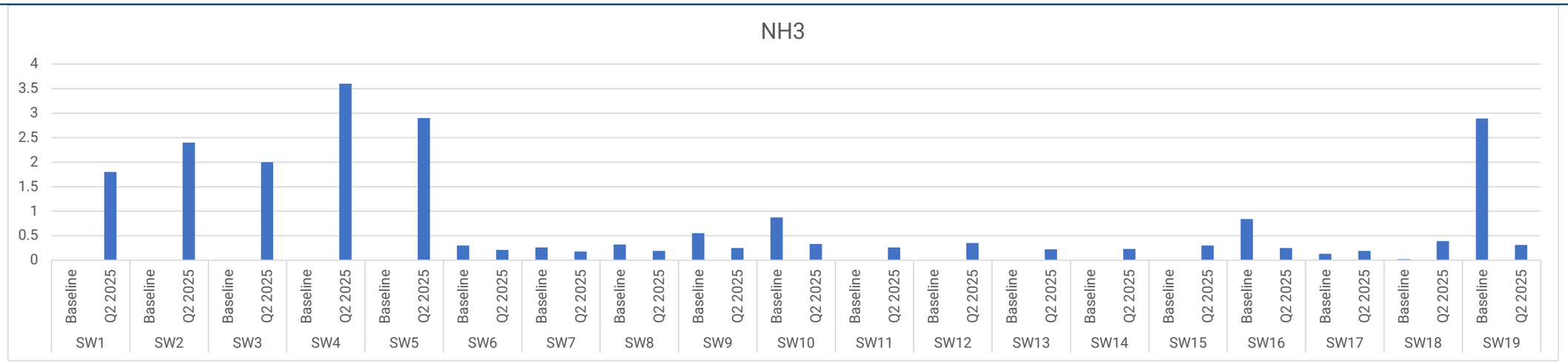
65. Surface water was monitored at SW26–SW29 during the baseline and Q4-2025. In Q4-2025, BOD (4.0–6.3 mg/L) and COD (14–15 mg/L) remained within the Bangladesh ECR-2023 limits, and DO stayed above 5 mg/L at all locations, indicating acceptable water quality. pH, TDS, TSS and turbidity were also within permissible levels, and oil & grease and total nitrogen remained very low. No exceedance of surface water quality standards was observed in Package-5.

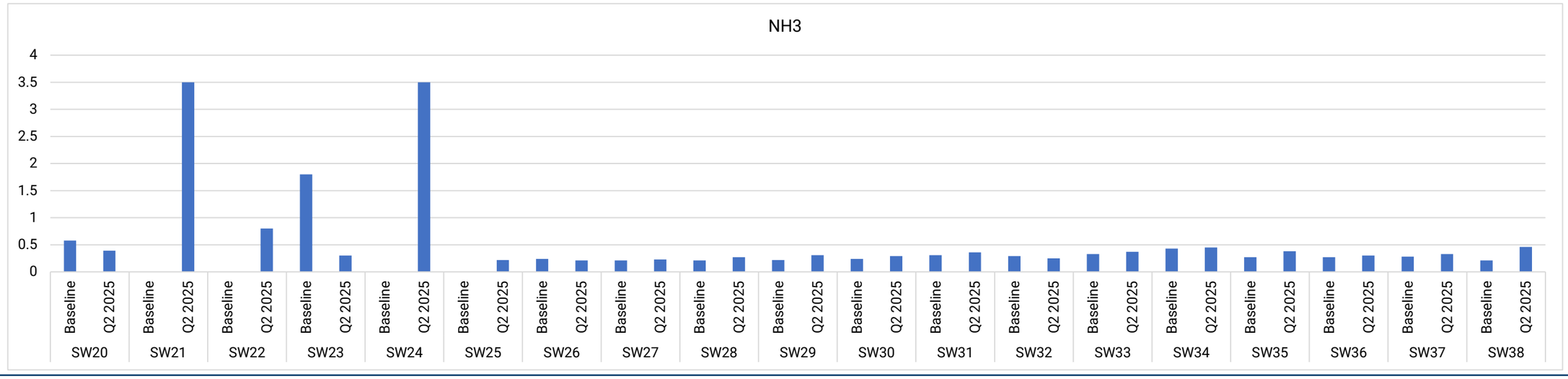
66. Surface water quality at SW30–SW33 showed some deterioration in Q4-2025. BOD (6–14 mg/L) and COD (21–29 mg/L) were elevated at all locations, with BOD exceeding the ECR limit of 6 mg/L at SW31, SW32 and SW33. DO dropped below the standard of 5 mg/L at SW31 (4.45 mg/L), indicating localized organic pollution. Other parameters such as pH, TDS and turbidity remained within acceptable limits. Overall, localized non-compliance was observed in Package-6 due to elevated BOD and reduced DO, likely influenced by nearby construction and domestic discharges.

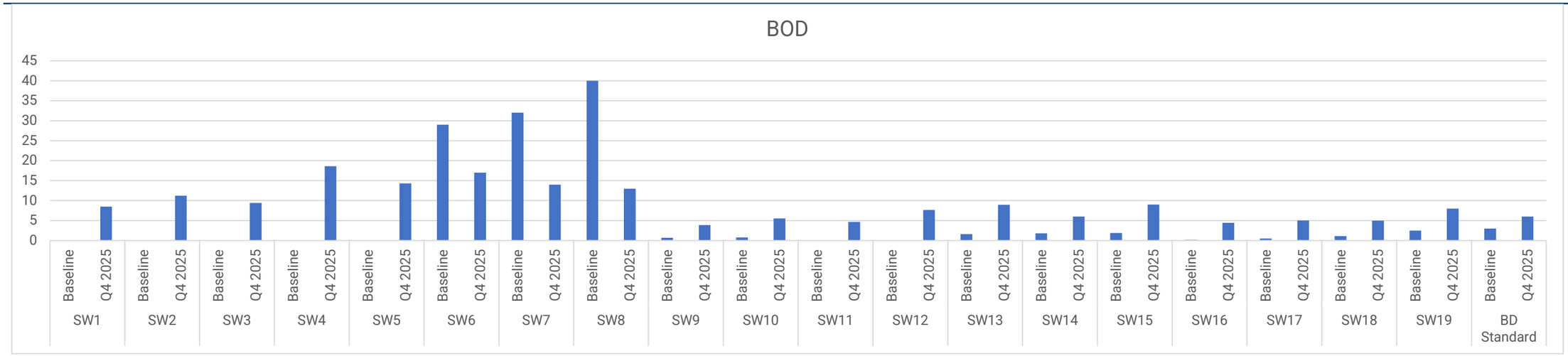
67. Surface water quality in Package-7 was monitored at SW34–SW38 during the baseline and Q4-2025 periods. In Q4-2025, BOD values (3–5 mg/L) and COD values (6–13 mg/L) remained within the Bangladesh ECR-2023 limits, and dissolved oxygen (DO) remained above 5 mg/L at all locations, indicating good oxygenation of the water bodies. pH (6.7–7.5), TDS, TSS and turbidity

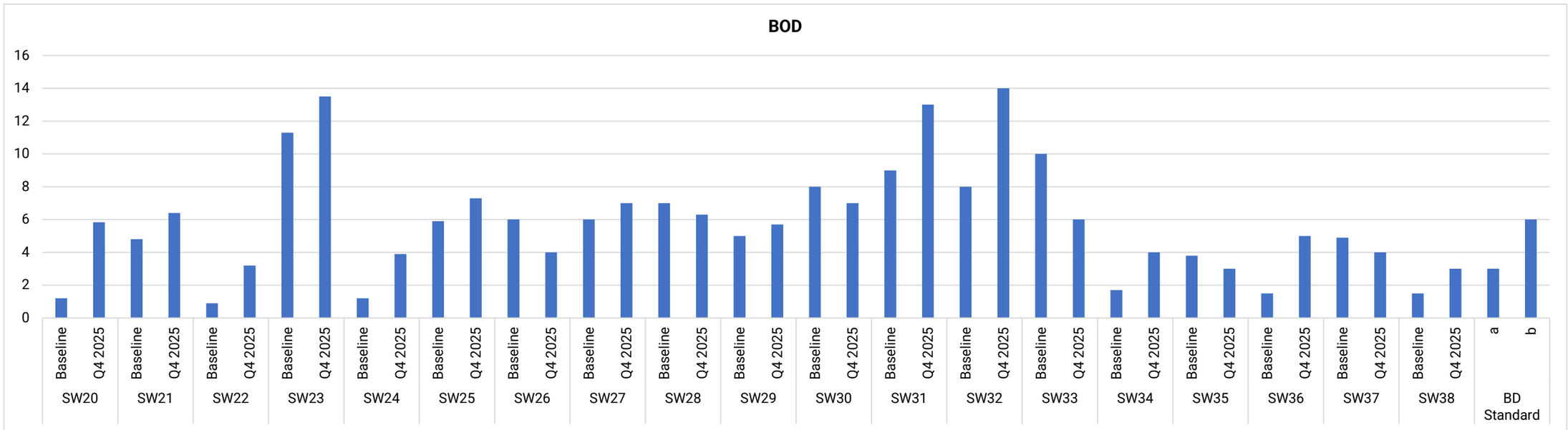
also remained within acceptable ranges. Total coliform levels significantly decreased compared to baseline, though some presence remained at a few locations. Overall, surface water quality in Package-7 complied with national standards during Q4-2025, indicating no significant impact from construction activities.

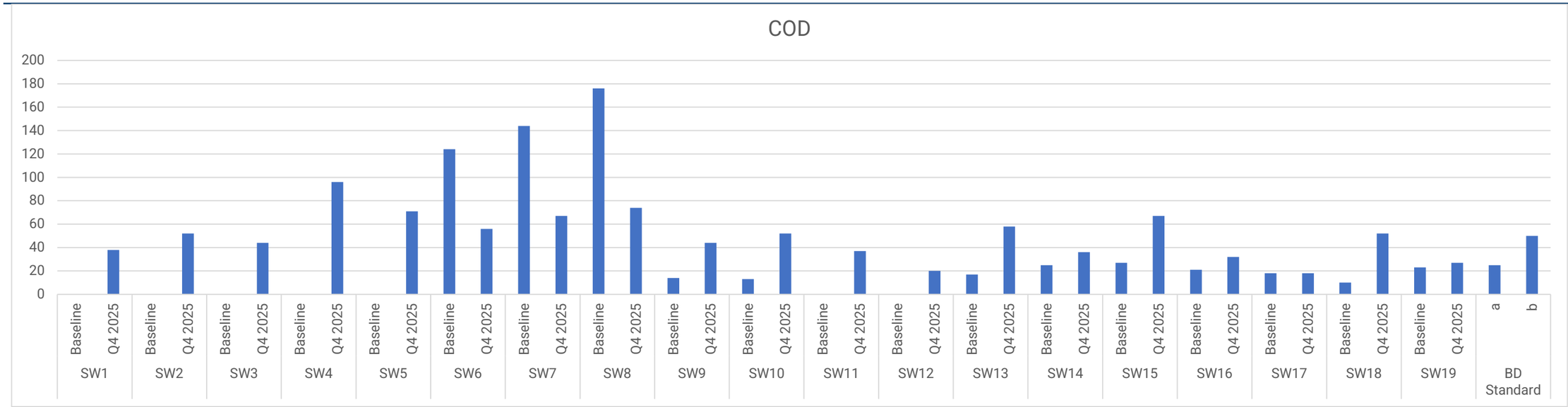
Figure 3-3: Surface Water Quality Analysis Results in Package 1- 7 project locations

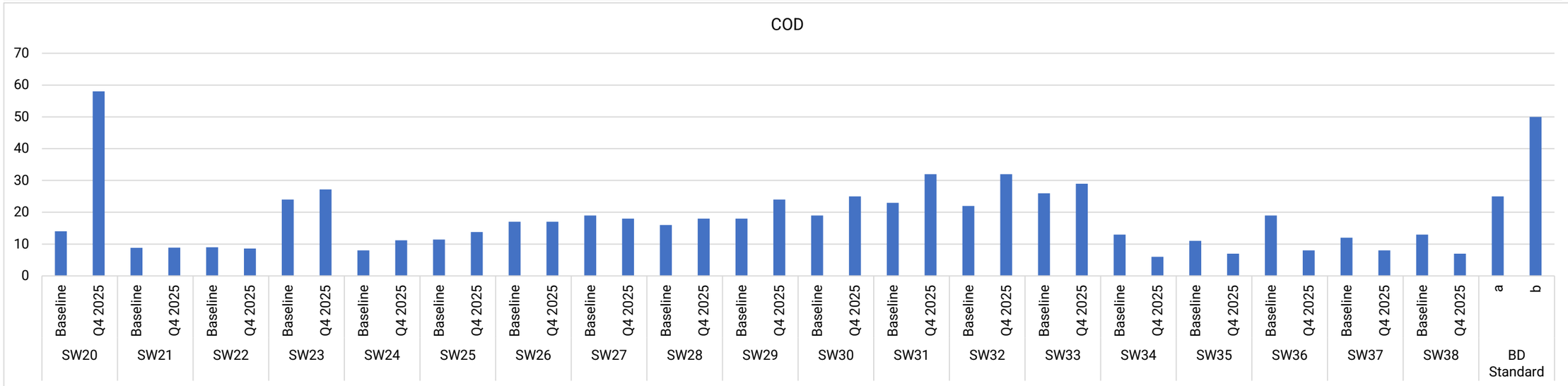


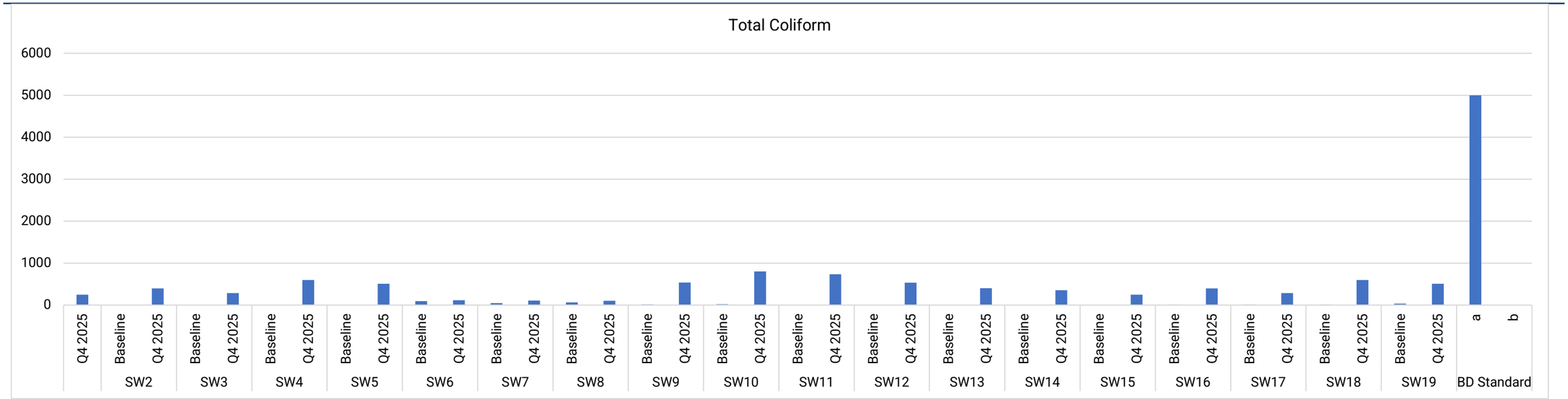


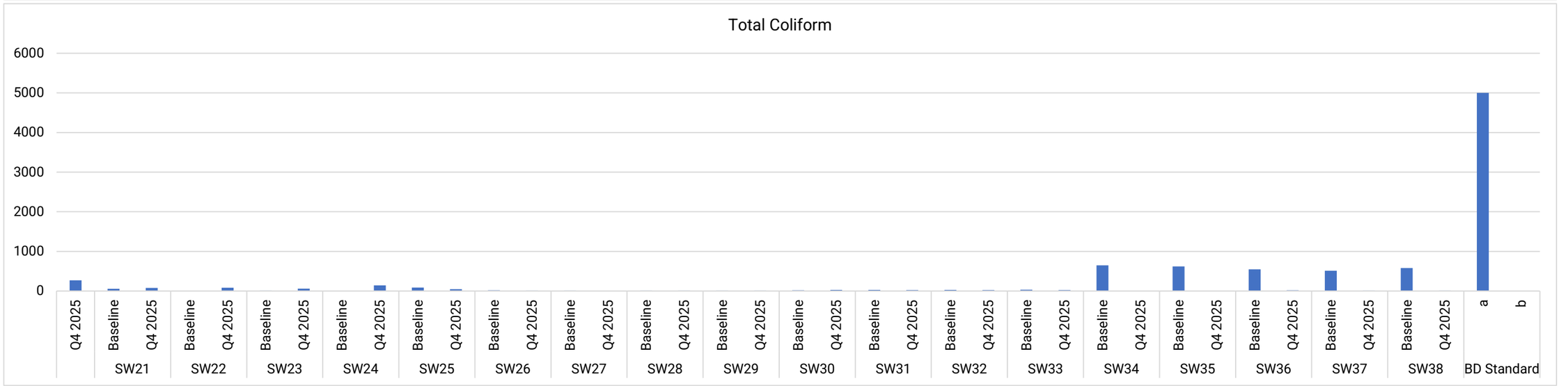

BOD
45
40
35
30
25
20
15
10
5
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
BD Standard

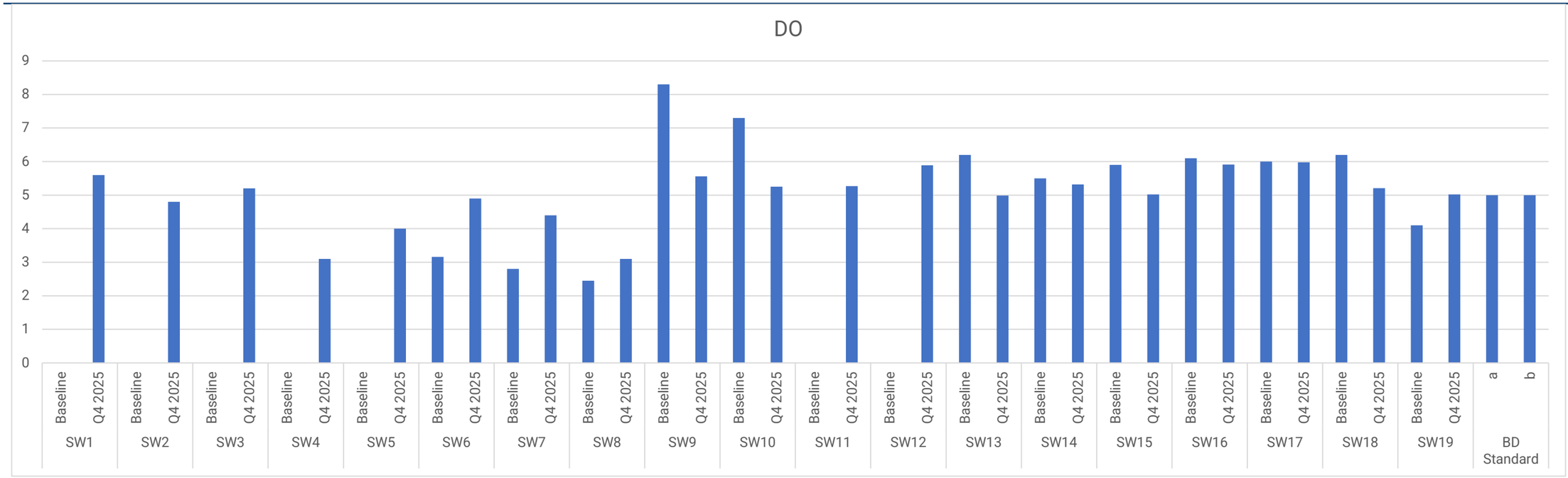

BOD
16
14
12
10
8
6
4
2
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard

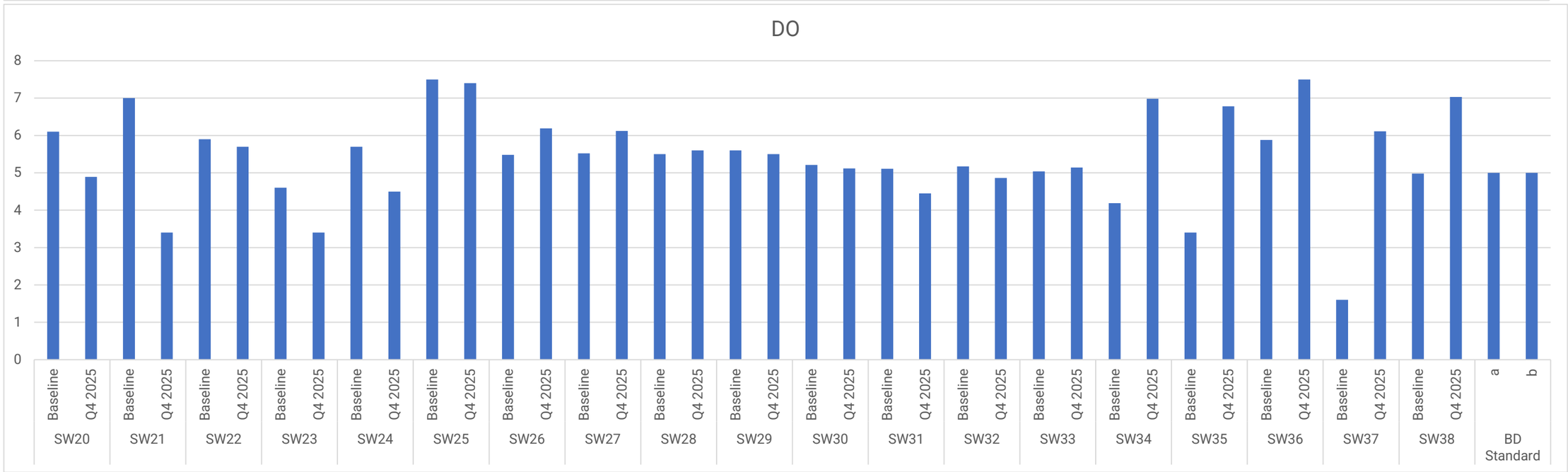

COD
200
180
160
140
120
100
80
60
40
20
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

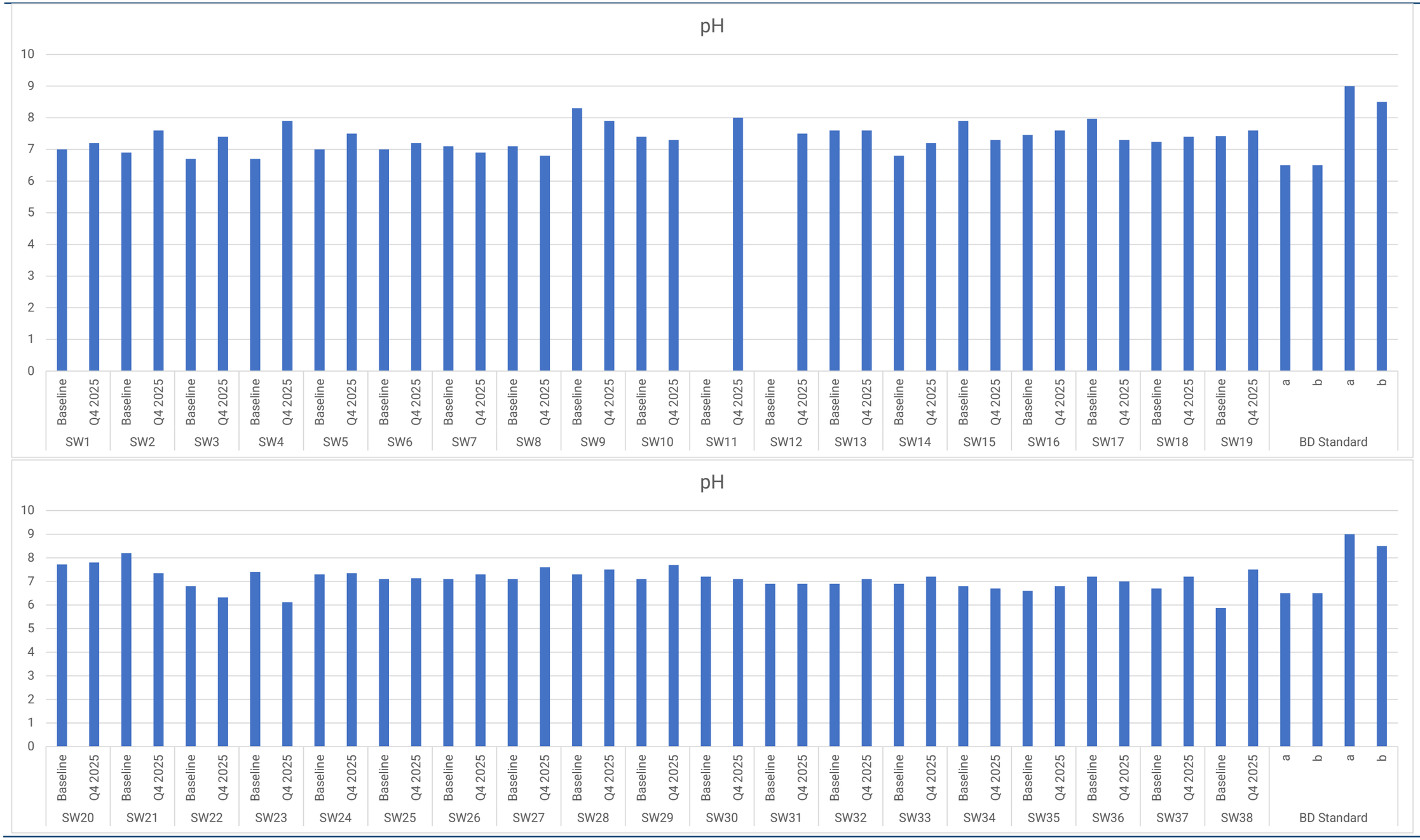

COD
70
60
50
40
30
20
10
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard

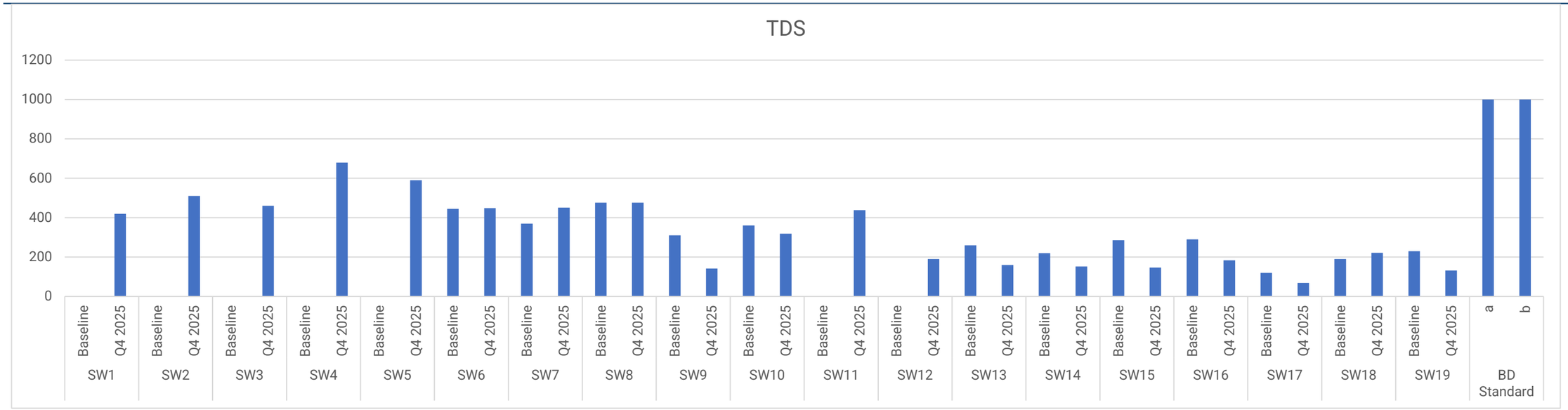

Total Coliform
6000
5000
4000
3000
2000
1000
0
Q4 2025
Baseline
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

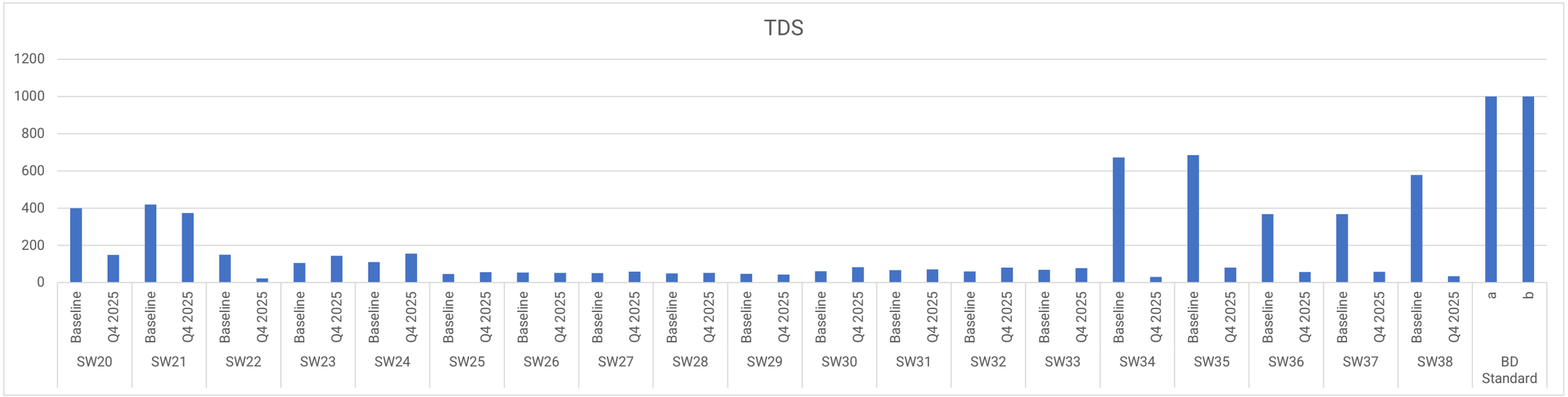

Total Coliform
6000
5000
4000
3000
2000
1000
0
Q4 2025
Baseline
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard

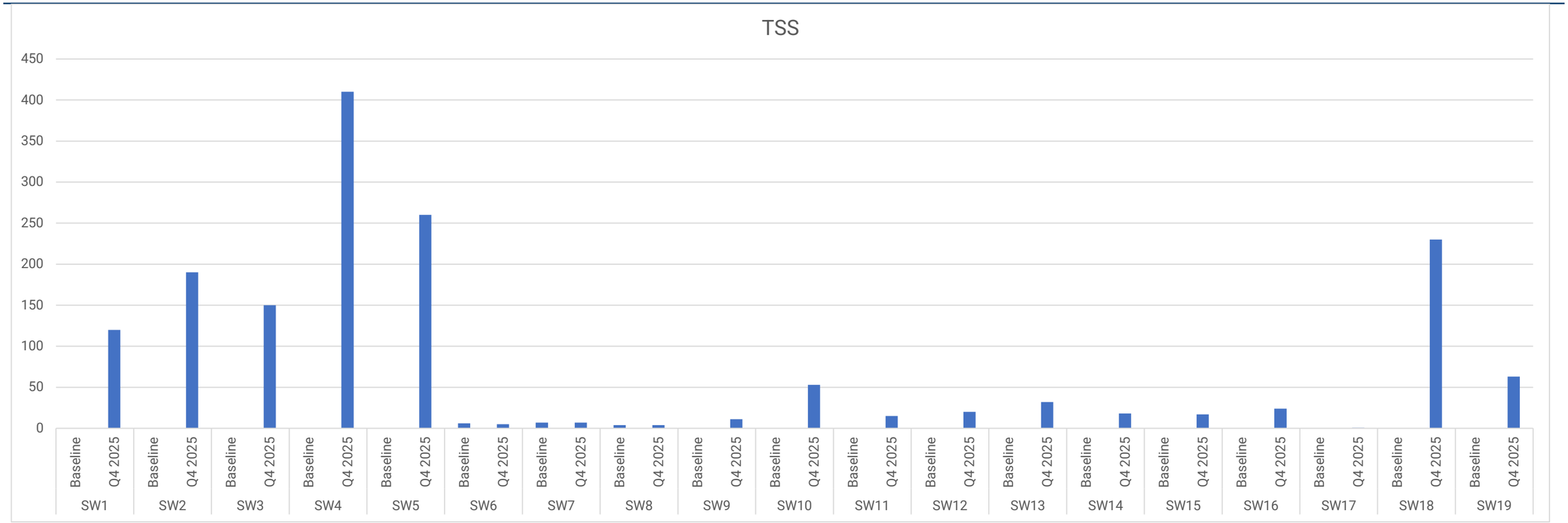

DO
9
8
7
6
5
4
3
2
1
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

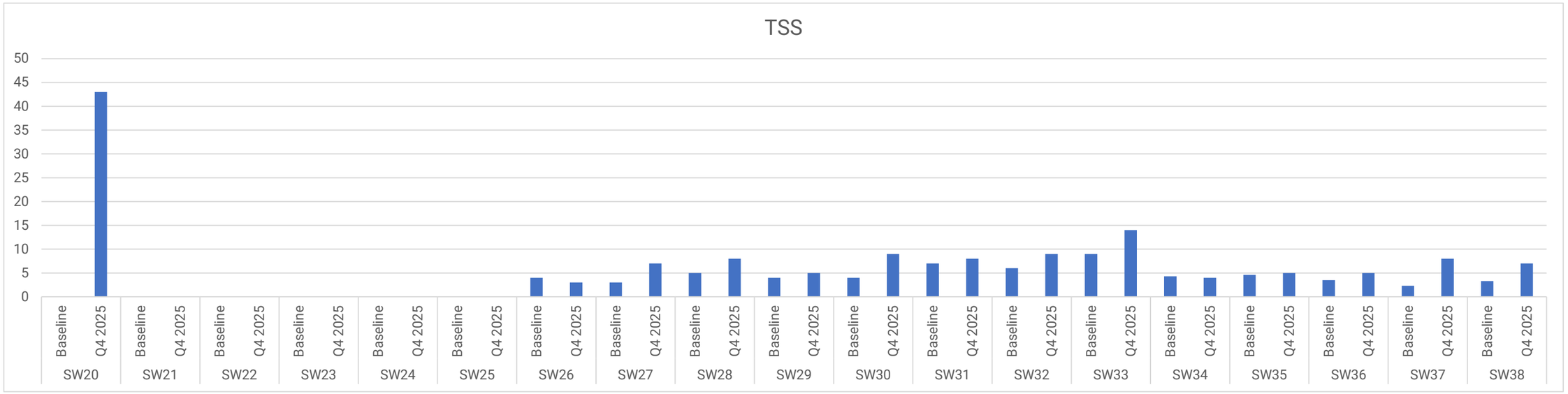

DO
8
7
6
5
4
3
2
1
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard

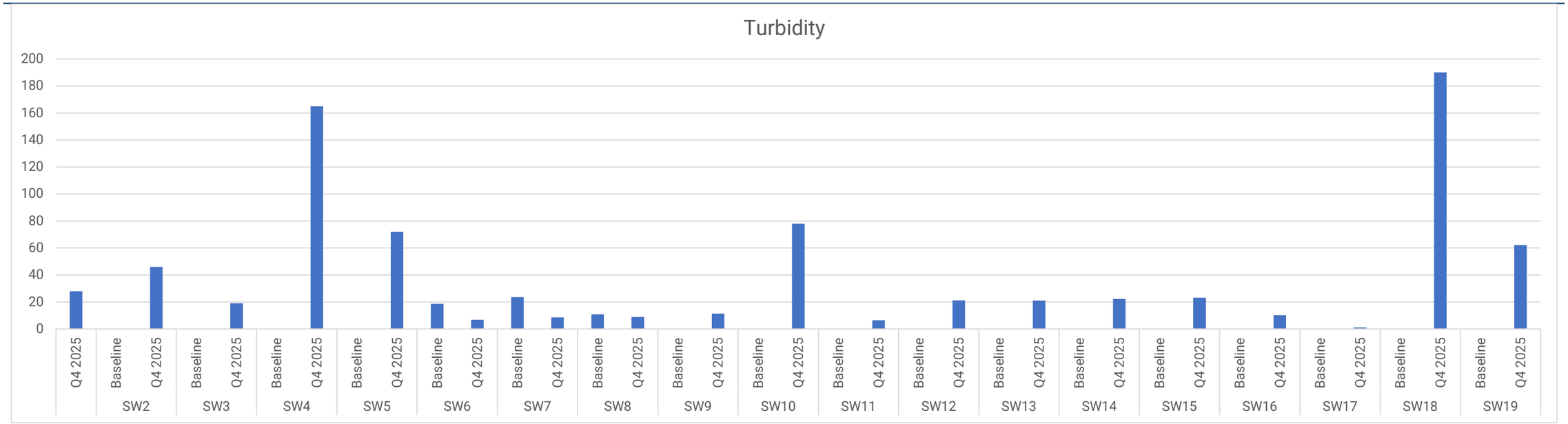

pH
10
9
8
7
6
5
4
3
2
1
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38

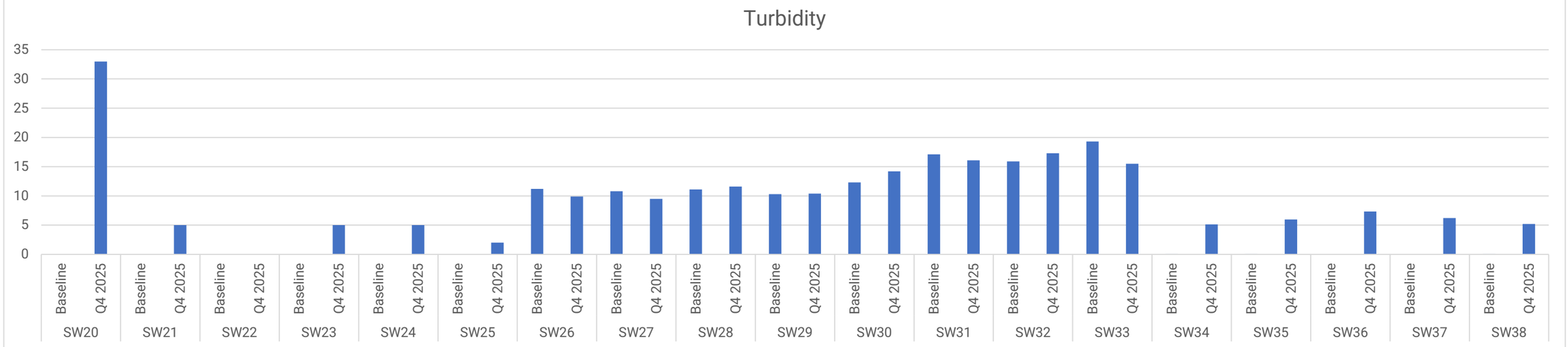

TDS
1200
1000
800
600
400
200
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

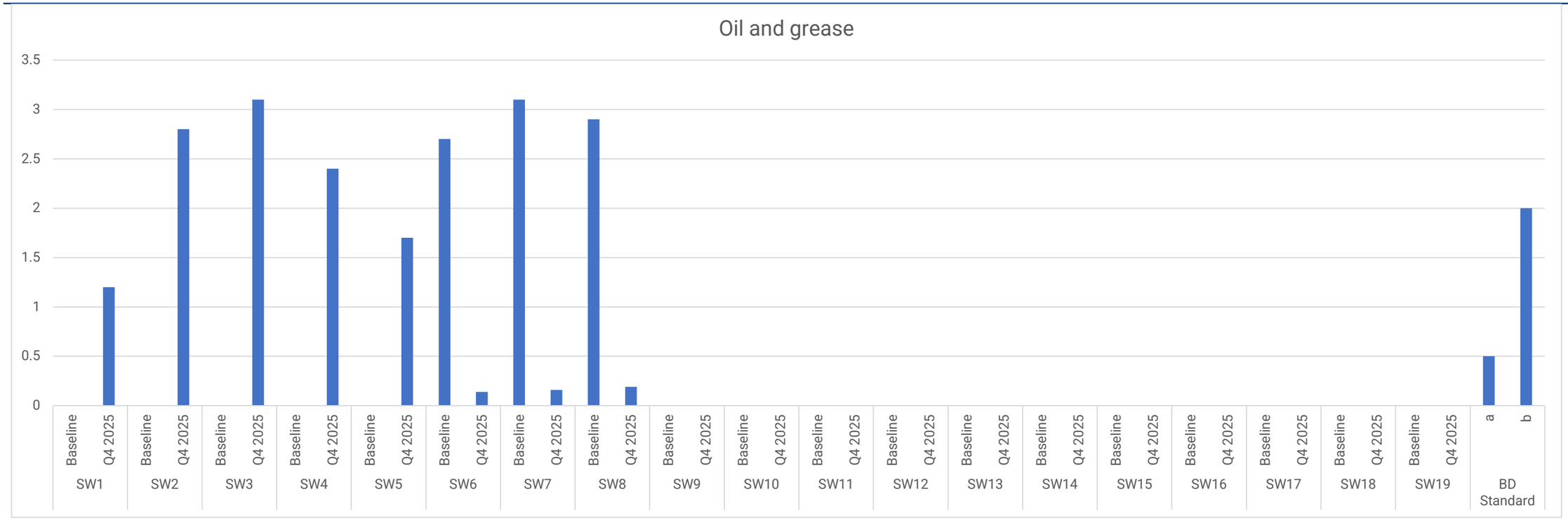

TDS
1200
1000
800
600
400
200
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard

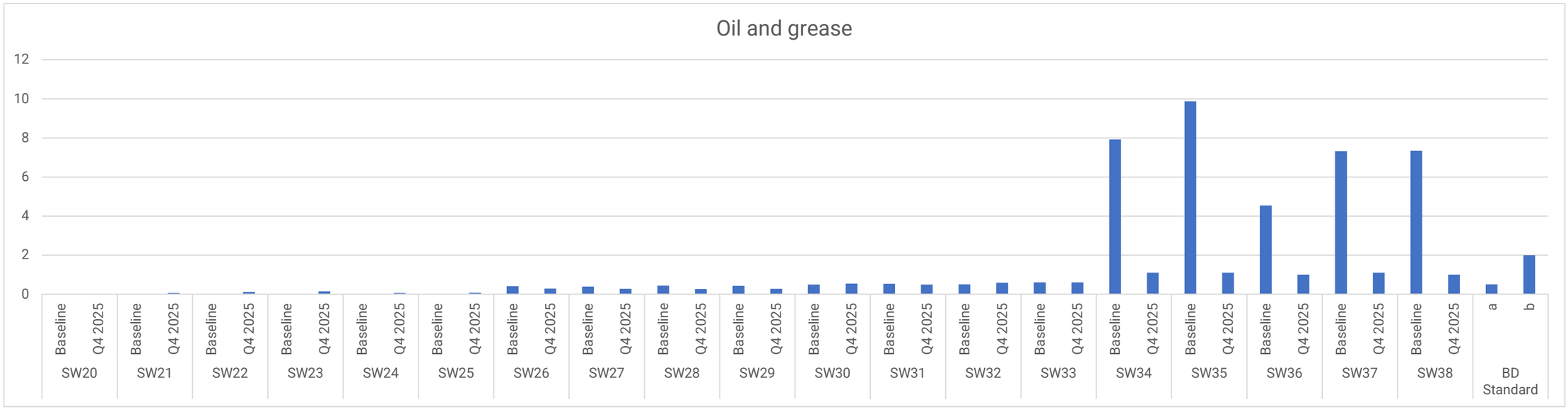

TSS
450
400
350
300
250
200
150
100
50
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19

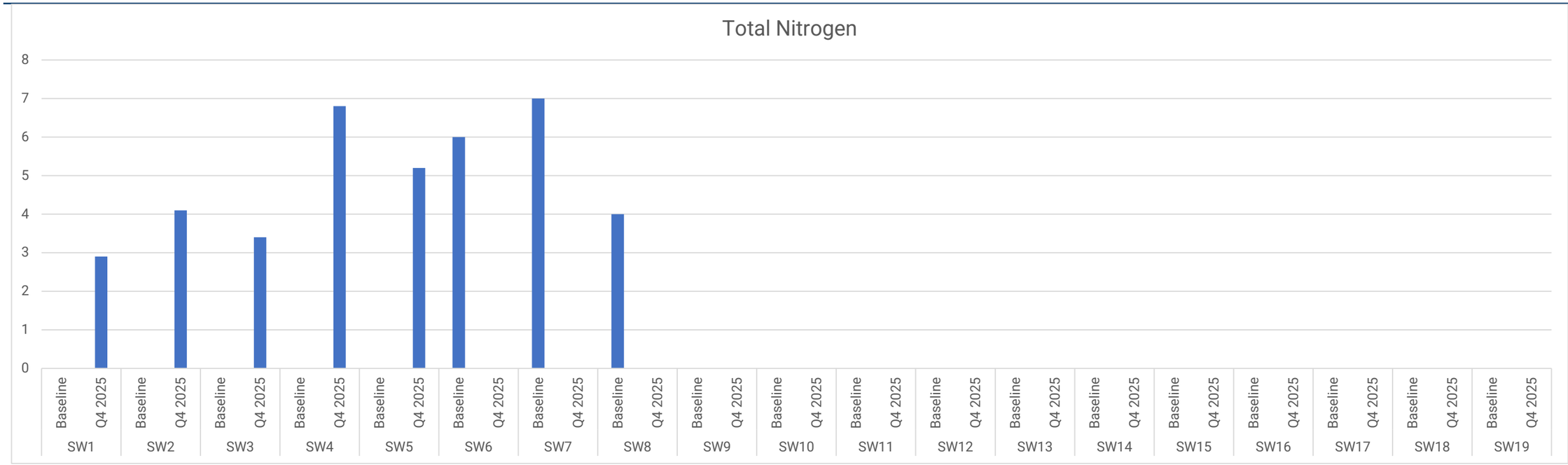

TSS
50
45
40
35
30
25
20
15
10
5
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38


Turbidity
200
180
160
140
120
100
80
60
40
20
0
Baseline
Q4 2025
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19


Turbidity
35
30
25
20
15
10
5
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38


Oil and grease
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard


Oil and grease
12
10
8
6
4
2
0
Baseline
Q4 2025
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38
a
b
BD Standard


Total Nitrogen
8
7
6
5
4
3
2
1
0
Baseline
Q4 2025
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19

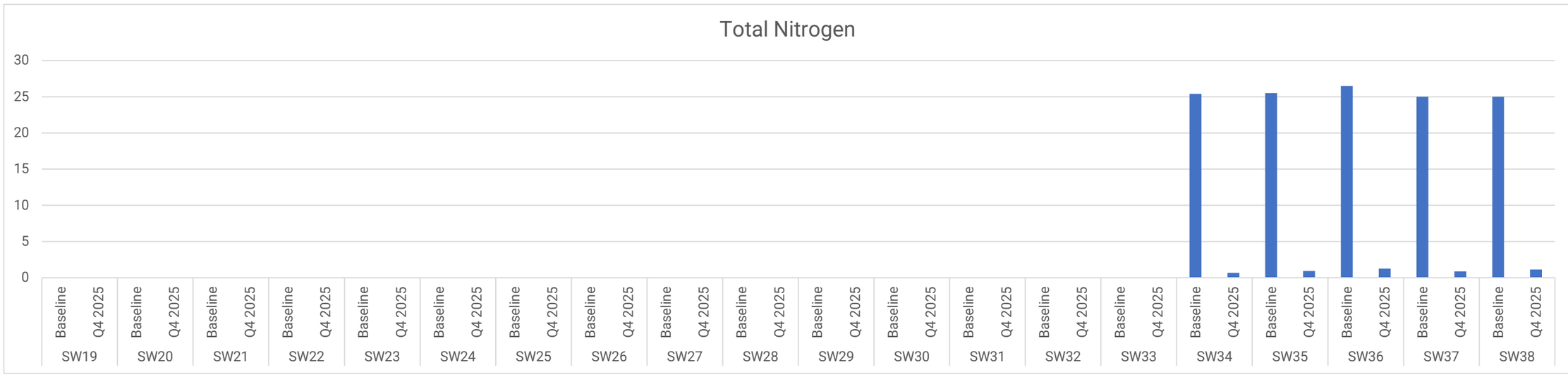

Total Nitrogen
30
25
20
15
10
5
0
Baseline
Q4 2025
SW19
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
SW35
SW36
SW37
SW38

Table 3-7: Surface Water Analysis Result of Package 1- 7 locations

Sl 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 1													
1.	SW1	Baseline						7			2.1		
		Q4 2025	1.8	8.5	38	249	5.6	7.2	420	120	28	1.2	2.9
2.	SW2	Baseline						6.9			3		
		Q4 2025	2.4	11.2	52	398	4.8	7.6	510	190	46	2.8	4.1
3.	SW3	Baseline						6.7			2.8		
		Q4 2025	2	9.4	44	287	5.2	7.4	460	150	19	3.1	3.4
4.	SW4	Baseline						6.7			2.5		
		Q4 2025	3.6	18.6	96	598	3.1	7.9	680	410	165	2.4	6.8
5.	SW5	Baseline						7					
		Q4 2025	2.9	14.3	71	510	4	7.5	590	260	72	1.7	5.2
Package 2													
Rampura- Bashundhara 132kV Underground Cable Line													
6.	SW6	Baseline	0.3	29	124	96	3.16	7	445	6	18.7	2.7	6
		Q4 2025	0.21	17	56	116	4.9	7.2	448	5	6.9	0.14	
7.	SW7	Baseline	0.26	32	144	48	2.8	7.1	370	7	23.5	3.1	7
		Q4 2025	0.18	14	67	107	4.4	6.9	451	7	8.6	0.16	
8.	SW8	Baseline	0.32	40	176	64	2.45	7.1	476	4	10.8	2.9	4
		Q4 2025	0.19	13	74	101	3.1	6.8	476	4	8.8	0.19	
Package 3													
Satkhira- Rupsha TL													
9.	SW9	Baseline	0.55	0.7	14	19	8.3	8.3	310				

Sl 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
		Q4 2025	0.25	3.86	44	538	5.56	7.9	142	11	11.4		
10.	SW10	Baseline	0.87	0.8	13	23	7.3	7.4	360				
		Q4 2025	0.33	5.56	52	802	5.25	7.3	319	53	78		
11.	SW11	Baseline											
		Q4 2025	0.26	4.67	37	736	5.27	8	438	15	6.4		
12.	SW12	Baseline											
		Q4 2025	0.35	7.65	20	534	5.89	7.5	190	20	21.2		
Satkhira- Manirampur TL													
13.	SW13	Baseline		1.6	17		6.2	7.6	260				
		Q4 2025	0.22	8.96	58	402	4.99	7.6	160	32	21.1		
14.	SW14	Baseline		1.8	25		5.5	6.8	220				
		Q4 2025	0.23	6.01	36	356	5.32	7.2	152	18	22.3		
15.	SW15	Baseline		1.9	27		5.9	7.9	285				
		Q4 2025	0.3	9.01	67	249	5.02	7.3	147	17	23.1		
Kushtia- Meherpur TL													
16.	SW16	Baseline	0.84	0.2	21	11	6.1	7.46	290				
		Q4 2025	0.25	4.45	32	398	5.91	7.6	184	24	10.2		
17.	SW17	Baseline	0.13	0.5	18	14	6	7.97	120				
		Q4 2025	0.19	5.03	18	287	5.98	7.3	69	0.7	1.1		
18.	SW18	Baseline	0.02	1.1	10	12	6.2	7.24	190				
		Q4 2025	0.39	4.97	52	598	5.21	7.4	222	230	190		
19.	SW19	Baseline	2.89	2.5	23	34	4.1	7.42	230				
		Q4 2025	0.31	7.99	27	510	5.02	7.6	132	63	62.2		
20.	SW20	Baseline	0.58	1.2	14	22	6.1	7.72	400				

Sl 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
		Q4 2025	0.39	5.84	58	269	4.89	7.8	149	43	33		
Package 4													
Bagerhat-Pirojpur-Bhandaria TL													
21.	SW21	Baseline	-	4.8	8.8	56	7	8.2	419	-	-	-	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Purba Sadipur- Domar TL													
22.	SW22	Baseline	-	0.9	9	-	5.9	6.8	150				
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Niamatpur- Patnitola TL													
23.	SW23	Baseline	1.8	11.3	24	14	4.6	7.4	105				
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Gopalganj-Shibchar TL													
24.	SW24	Baseline		1.2	8	-	5.7	7.3	110				
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Domar-Hatibandha TL													
25.	SW25	Baseline	-	5.9	11.4	88	7.5	7.1	46	-	-	-	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Package 5													
400/230 kV GIS Substation at Kaliganj, Gazipur													
26.	SW26	Baseline	0.24	6	17	17	5.48	7.1	54	4	11.2	0.41	<1.0
		Q4 2025	0.21	4	17	14	6.19	7.3	52	3	9.9	0.29	<1.0
27.	SW27	Baseline	0.21	6	19	15	5.52	7.1	51	3	10.8	0.39	<1.0
		Q4 2025	0.23	7	18	11	6.12	7.6	59	7	9.5	0.28	<1.0
28.	SW28	Baseline	0.21	7	16	15	5.5	7.3	49	5	11.1	0.44	<1.0

Sl 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
		Q4 2025	0.27	6.3	18	15	5.6	7.5	52	8	11.6	0.27	<1.0
29.	SW29	Baseline	0.22	5	18	14	5.6	7.1	47	4	10.3	0.43	<1.0
		Q4 2025	0.31	5.7	24	15	5.5	7.7	43	5	10.4	0.28	<1.0
Package 6													
400/230/132 KV GIS Substation at Purbachal													
30.	SW30	Baseline	0.24	8	19	21	5.21	7.2	61	4	12.3	0.49	<1.0
		Q4 2025	0.29	7	25	26	5.12	7.1	83	9	14.2	0.54	<1.0
31.	SW31	Baseline	0.31	9	23	27	5.11	6.9	67	7	17.1	0.53	<1.0
		Q4 2025	0.36	13	32	24	4.45	6.9	71	8	16.1	0.49	<1.0
32.	SW32	Baseline	0.29	8	22	29	5.17	6.9	60	6	15.9	0.5	<1.0
		Q4 2025	0.25	14	32	25	4.86	7.1	81	9	17.3	0.59	<1.0
33.	SW33	Baseline	0.33	10	26	31	5.04	6.9	69	9	19.3	0.61	<1.0
		Q4 2025	0.37	6	29	22	5.14	7.2	78	14	15.5	0.61	<1.0
Package 7													
34.	SW34	Baseline	0.43	1.7	13	6.5×102	4.19	6.8	672	4.3	0.078	7.92	25.4
		Q4 2025	0.45	4	6	10	6.98	6.7	30	4	5.12	1.1	0.69
35.	SW35	Baseline	0.27	3.8	11	6.2×102	3.4	6.6	685	4.6	0.097	9.87	25.5
		Q4 2025	0.38	3	7	11	6.78	6.8	81	5	5.98	1.1	0.93
36.	SW36	Baseline	0.27	1.5	19	5.5×102	5.88	7.2	368	3.5	0.046	4.54	26.5
		Q4 2025	0.3	5	8	17	7.5	7	57	5	7.33	1	1.27
37.	SW37	Baseline	0.28	4.9	12	5.1×102	1.6	6.7	368	2.3	0.066	7.32	25
		Q4 2025	0.33	4	8	13	6.11	7.2	58	8	6.23	1.1	0.87
38.	SW38	Baseline	0.21	1.5	13	5.8×102	4.98	5.87	578	3.3	0.084	7.34	25
		Q4 2025	0.46	3	7	16	7.03	7.5	34	7	5.19	1	1.13

Sl 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
Bangladesh Standard[8]		**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 July- December 2025 (Package 1- 7)

a. Water usable for fisheries

b. Water usable for irrigation

NYS- Not yet submitted

[8] 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

68. 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.

69. 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

70. 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 1- 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
Package 1					
1.	GW1	Near T-1/0	23°58'6.29"N 90°32'55.859"E	Tube-Well	20.12.2025-21.12.2025
2.	GW2	Near T-4/0	23°57'28.667"N 90°33'24.84"E		
3.	GW3	Near T-3/0	23°57'22.085"N 90°33'17.38"E		
4.	GW4	Near T-2/3	23°57'22.755"N 90°32'58.451"E		
5.	GW5	Near T-2/1	23°56'12.589"N 90°33'32.488"E		
Package 2					
Rampura- Bashundhara 132kV Underground Cable Line					
6.	GW6	Hospital, Near the Substation Area in Bashundhara Residential Area	23.81656N 90.43605E	Tube-Well	10.08.2025
7.	GW7	Mosque, Near United International University	23.80374N 90.44242E		
8.	GW8	Mosque, Near the Substation Area	23.76747N 90.42981E		
Package 3					
Satkhira- Rupsha TL					
9.	GW9	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	Tube-Well	17.12.2025-18.12.2025
10.	GW10	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	Tube-Well	
11.	GW11	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	Tube-Well	
12.	GW12	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	Tube-Well	
Satkhira- Manirampur TL					
13.	GW13	Magura, Satkhira	22.741249 N, 89.091239 E	Tube-Well	19.12.2025-20.12.2025

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
14.	GW14	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	Tube-Well	
15.	GW15	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	Tube-Well	
Kushtia- Meherpur TL					
16.	GW16	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	Tube-Well	20.12.2025-21.12.2025
17.	GW17	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	Tube-Well	
18.	GW18	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	Tube-Well	
19.	GW19	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	Tube-Well	
20.	GW20	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	Tube-Well	
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
21.	GW21	T-2/4	22°38'18.4"N 89°49'17.2"E	Tube-Well	03.05.2025
Purba Sadipur- Domar TL					
22.	GW22	AP-12	25°54'40"N 88°45'27"E	Deep	21.05.2025
Niamatpur- Patnitola TL					
23.	GW23	Chatara Bazar, Niamatpur	24°53'37.28"N 88°38'42.44"E	Deep	15.05.2025
Gopalganj-Shibchar TL					
24.	GW24	Near AP-01	23°16'25.89"N 90° 0'46.002"E	Tube-Well	09.05.2025
Domar-Hatibandha TL					
25.	GW25	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					
26.	GW26	Hafej Sheikh's House	23.968512 N; 90.548888 E	Tube-Well	06-09-2025- 07-09-2025
27.	GW27	Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	23.963364 N; 90.548810 E		
28.	GW28	Mamun Mia's House	23.965455 N; 90.554317 E		
29.	GW29	Late Abdul Razzak's House	23.969981 N; 90.553189 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
30.	GW30	Beside Dulal Mia's Shop	23.864612 N 90.475215 E	Tube-Well	11.08.2025-12.08.2025
31.	GW31	Beside Dipak Chakraborty' s Shop	23.866261 N 90.475607 E		

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
32.	GW32	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.862167 N 90.477112 E		
33.	GW33	Beside Mohadev Karmakar's house	23.868053 N 90.476480 E		
Package 7					
34.	GW34	Near 132/33 kV GIS substation at Phultola	22°55'16.39"N 89°29'16.90"E	Tube-Well	08.09.2025 - 10.09.2025
35.	GW35	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.21"N 89°37'4.58"E		
36.	GW36	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E		
37.	GW37	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E		
38.	GW38	Near 132/33 kV GIS substation at Manirampur	22°58'29.84"N 89°13'44.03"E		

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 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

71. 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: Environmental Monitoring Pictures and Annexure-33: Environmental Monitoring Lab Sheet.

72. Groundwater quality monitoring was conducted at tube wells and hand pumps located near the project sites to assess potential impacts of construction activities on subsurface water resources. Samples were collected and analyzed for key drinking water parameters including pH, electrical conductivity (EC), total dissolved solids (TDS), iron (Fe), arsenic (As), manganese (Mn), chloride, salinity, turbidity, total petroleum hydrocarbons (TPH) and coliform bacteria, and the results were compared with the Bangladesh Environment Conservation Rules (ECR), 2023; Schedule 2(B) for drinking water.

73. Groundwater quality in Package-1 was monitored at GW1–GW5 during the baseline and Q4-2025 periods and compared with applicable Bangladesh standards. In Q4-2025, arsenic (0.02–0.04 mg/L) and chloride (110–150 mg/L) at all locations remained within the permissible limits (As ≤0.05 mg/L; chloride ≤250 mg/L). Total and fecal coliform were not detected at any station, indicating microbiological safety of the sampled groundwater. Concentrations of iron (0.3–0.9 mg/L) and manganese (0.18–0.30 mg/L) were within the allowable ranges, while pH (6.9–7.3) complied with the standard range of 6.5–8.5. Salinity (0.045–0.15‰), turbidity (2.1–3.3 NTU), electrical conductivity (178–234 µS/cm), hardness (11–17 mg/L), temperature (23–26°C) and TPH (0.03–0.09 mg/L) were also within acceptable limits. Overall, groundwater quality in Package-1 during Q4-2025 remained compliant with national standards, with no indication of project-related contamination relative to baseline conditions.

74. Groundwater in Package-2 was monitored at GW6 to GW8. The results show that arsenic (0.001–0.002 mg/L), iron (0.33–0.67 mg/L) and manganese (0.01–0.02 mg/L) remained within the Bangladesh drinking water standards, and pH ranged from 7.2 to 7.7, which is within acceptable limits. No fecal or total coliform was detected, and TPH was below 2.0 mg/L at all locations,

indicating no hydrocarbon contamination. Overall, groundwater quality in Package-2 remained compliant with applicable standards during Q4-2025, confirming that underground cable installation did not adversely affect groundwater.

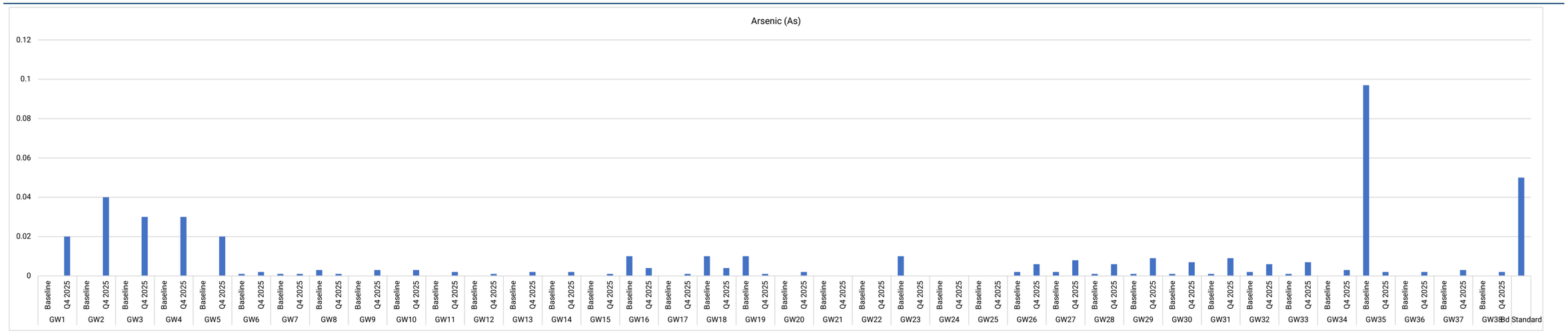
75. Groundwater quality in Package-3, covering the Satkhira–Rupsha, Satkhira–Manirampur and Kushtia–Meherpur transmission line corridors, was monitored at GW9–GW20 during the baseline and Q4-2025 periods. The results show that pH (7.3–8.3), salinity and turbidity remained within acceptable limits at all locations, and no fecal or total coliform was detected, indicating good microbiological quality. Arsenic concentrations (0.001–0.004 mg/L) were well below the Bangladesh ECR drinking-water limit of 0.05 mg/L. Iron and manganese remained within national standards at most locations; however, manganese at GW17 (1.41 mg/L) in Q4-2025 exceeded the ECR limit of 0.4 mg/L, indicating localized groundwater quality concern. Total petroleum hydrocarbons (TPH) were BDL at most stations, showing no hydrocarbon contamination. Overall, groundwater quality in Package-3 was largely compliant, with only a localized manganese exceedance at GW17 during the reporting period.

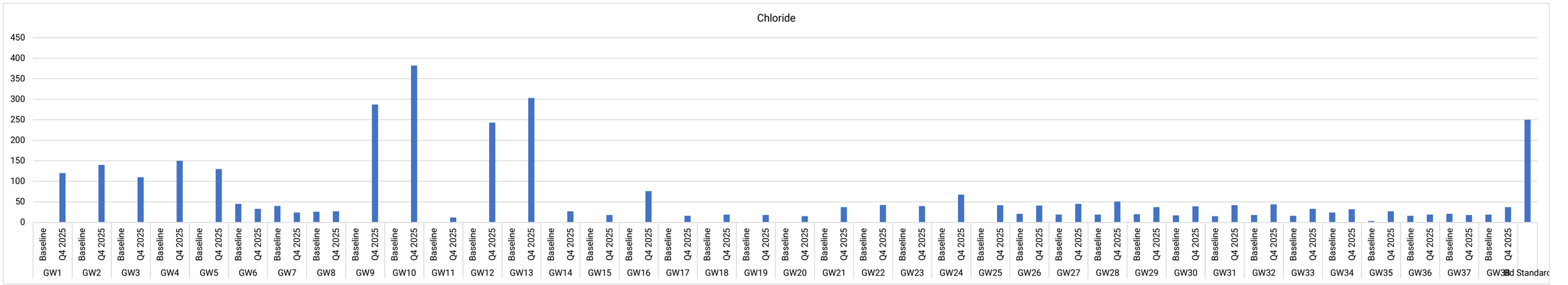
76. Groundwater was monitored at GW26–GW29 during the baseline and Q4-2025. Arsenic (0.006–0.009 mg/L) remained well below the Bangladesh drinking-water limit of 0.05 mg/L, and no fecal or total coliform was detected, indicating good microbiological quality. Iron (0.43–0.52 mg/L) in Q4-2025 exceeded the national standard of 0.30 mg/L at all four locations (GW26–GW29), while manganese (0.02–0.05 mg/L) remained within limits. pH, EC and turbidity were within acceptable ranges. Overall, groundwater quality was chemically acceptable except for elevated iron, which is likely of geogenic origin.

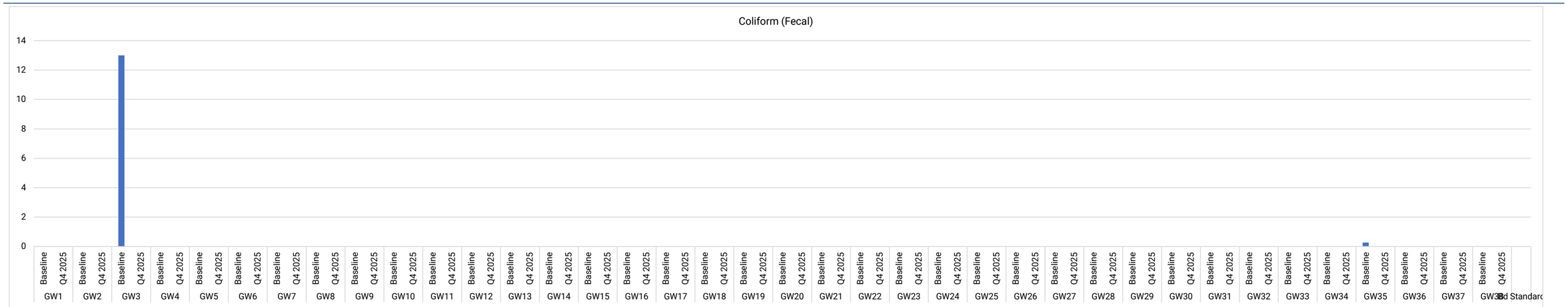
77. Groundwater quality at GW30–GW33 showed a similar pattern. Arsenic (0.006–0.009 mg/L) and manganese (0.03–0.05 mg/L) were within drinking-water standards, and no coliform bacteria were detected. However, iron levels (0.41–0.51 mg/L) in Q4-2025 exceeded the Bangladesh limit of 0.30 mg/L at all locations, while pH and EC remained within acceptable limits. Overall, groundwater in Package-6 was largely compliant, with localized iron exceedance likely due to natural groundwater characteristics rather than project activities.

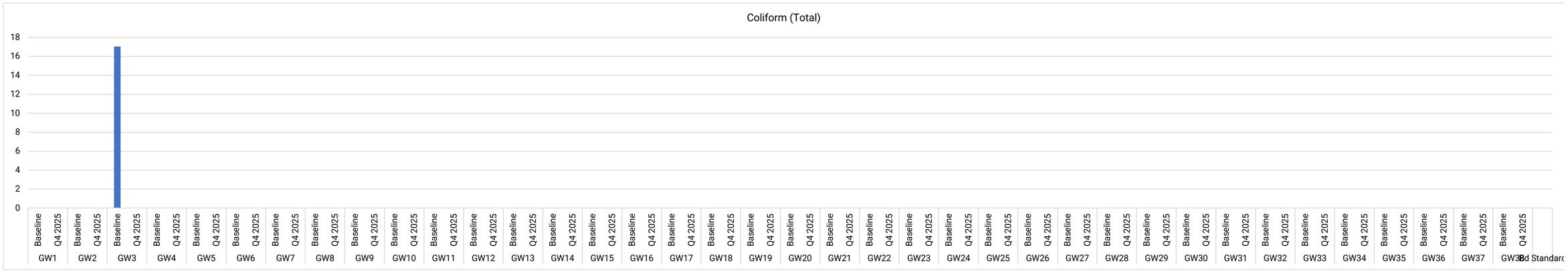
78. Groundwater quality in Package-7 was monitored at GW34–GW38 during the baseline and Q4-2025 periods. The results show that arsenic concentrations (<0.002–0.003 mg/L) remained well below the Bangladesh drinking-water standard of 0.05 mg/L, and no fecal or total coliform was detected, indicating good microbiological quality. pH (6.9–7.5), chloride, EC, salinity and turbidity were within acceptable limits. Iron concentrations ranged from 0.6 to 1.3 mg/L in Q4-2025, which were within the Bangladesh allowable range (0.3–1.0 mg/L), while manganese (0.01–0.04 mg/L) remained well below the limit of 0.4 mg/L. Overall, all groundwater quality parameters in Package-7 complied with Bangladesh ECR-2023 drinking-water standards, indicating no groundwater contamination during the reporting period.

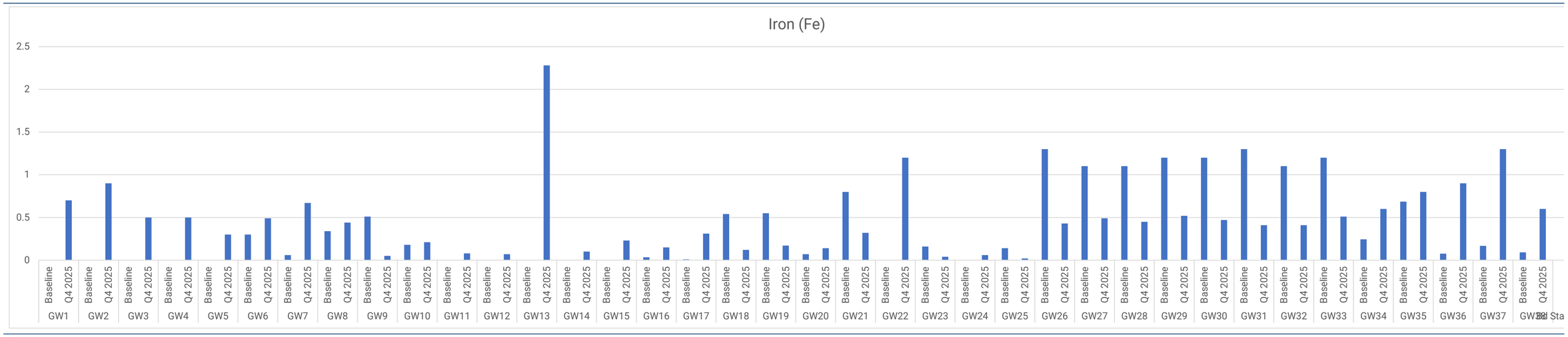
Figure 3-4: Ground Water Quality Analysis Results in Package 1- 7 project locations

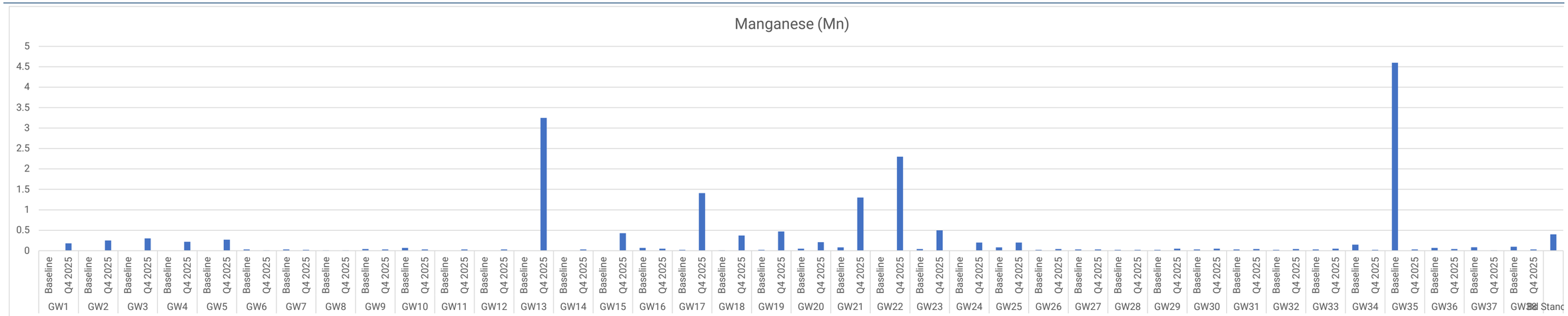


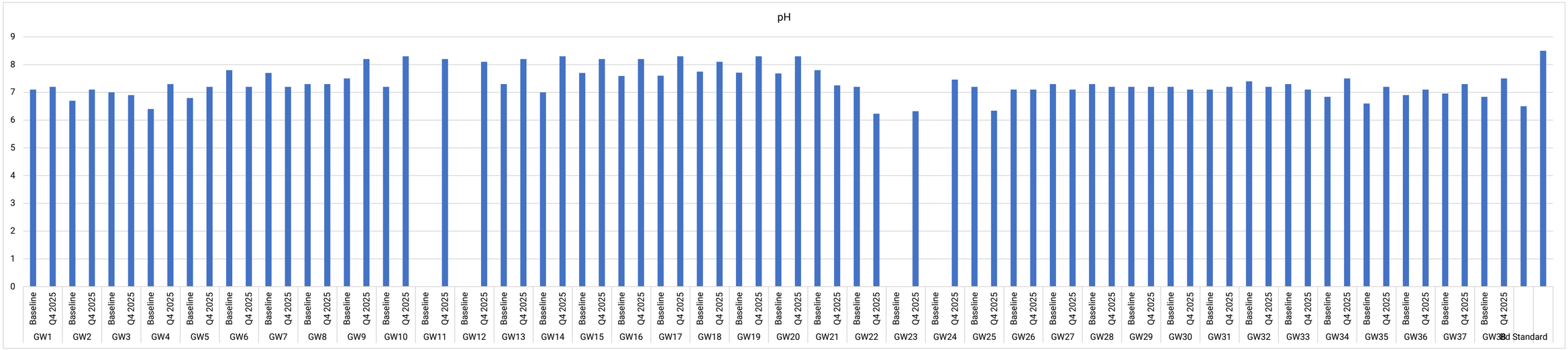


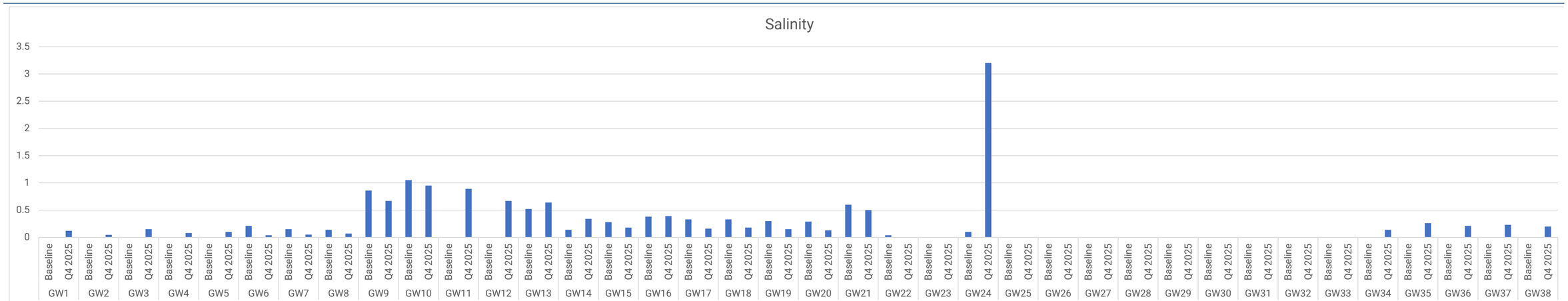


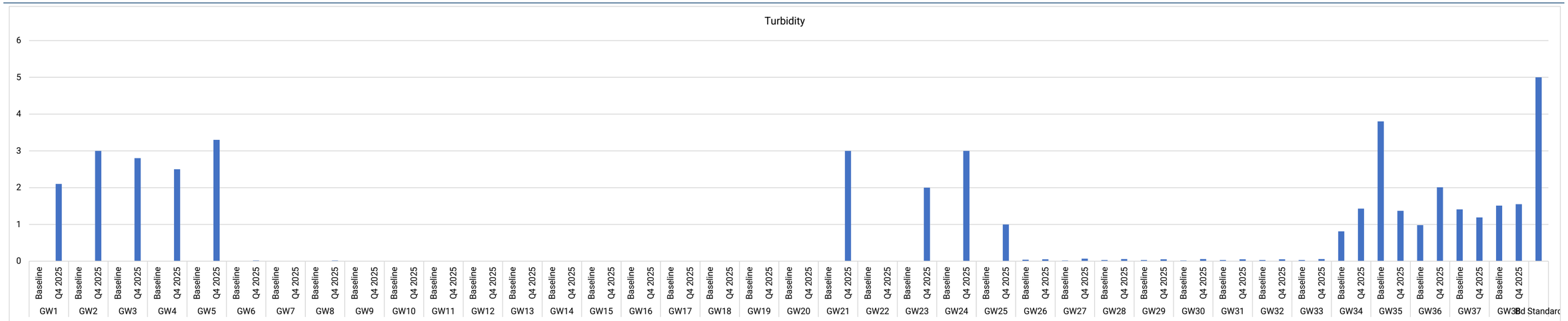

Coliform (Total)
18
16
14
12
10
8
6
4
2
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
Bd Standard

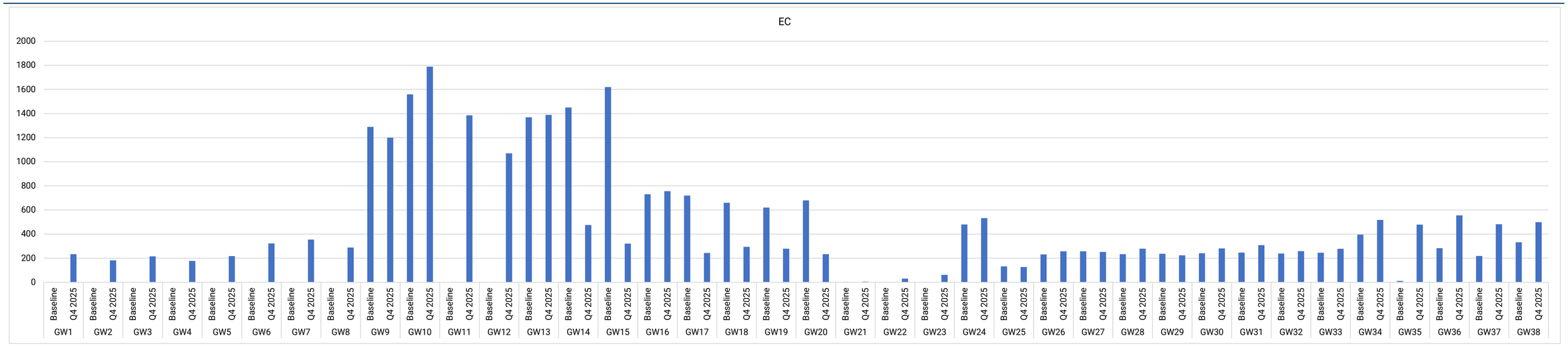

Iron (Fe)
2.5
2
1.5
1
0.5
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
Bd Standard

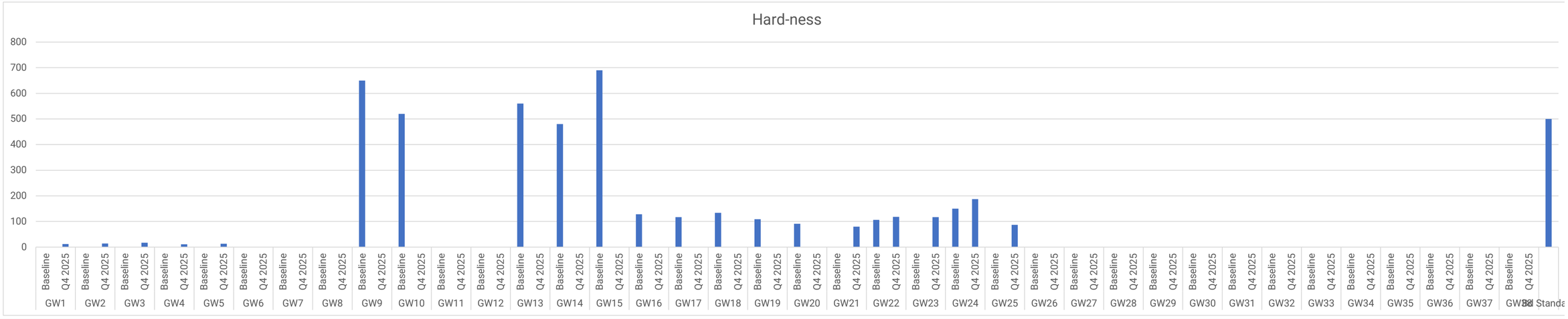

Manganese (Mn)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
Bd Standard

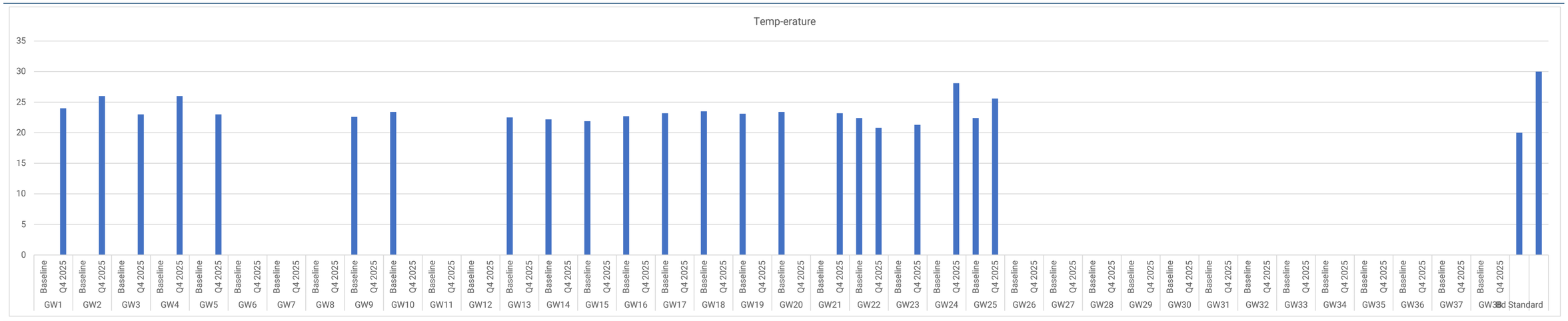

pH
9
8
7
6
5
4
3
2
1
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38
Bd Standard


Salinity
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38


Turbidity
6
5
4
3
2
1
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38
Bd Standard


EC
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38


Hard-ness
800
700
600
500
400
300
200
100
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38
Standard


Temp-erature
35
30
25
20
15
10
5
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
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GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38
Standard

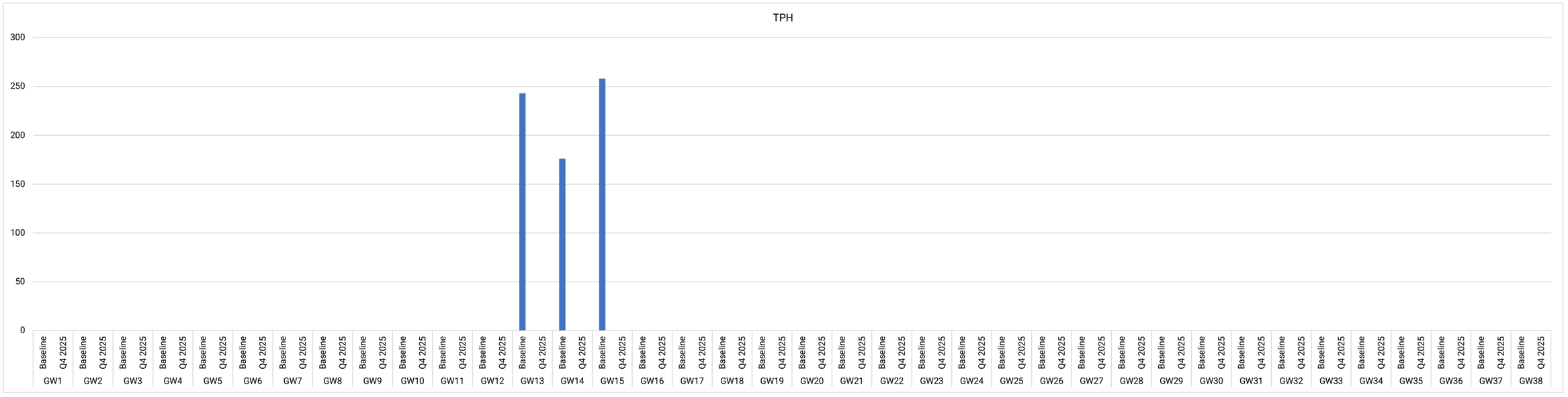

TPH
300
250
200
150
100
50
0
Baseline
Q4 2025
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
GW35
GW36
GW37
GW38

Table 3-9: Ground Water Quality Analysis of Package 1- 7 locations

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hard-ness	Temp-erature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
Package 1															
1.	GW1	Baseline			0	0			7.1						
		Q4 2025	0.02	120	0	0	0.7	0.18	7.2	0.12	2.1	234	12	24	0.04
2.	GW2	Baseline			0	0			6.7						
		Q4 2025	0.04	140	0	0	0.9	0.25	7.1	0.045	3	182	14	26	0.07
3.	GW3	Baseline			13	17			7						
		Q4 2025	0.03	110	0	0	0.5	0.3	6.9	0.15	2.8	215	17	23	0.03
4.	GW4	Baseline			0	0			6.4						
		Q4 2025	0.03	150	0	0	0.5	0.22	7.3	0.08	2.5	178	11	26	0.09
5.	GW5	Baseline			0	0			6.8						
		Q4 2025	0.02	130	0	0	0.3	0.27	7.2	0.1	3.3	218	13	23	0.06
Package 2															
Rampura- Bashundhara 132kV Underground Cable Line															
6.	GW6	Baseline	0.001	45	0	0	0.3	0.03	7.8	0.21	-	-	-	-	-
		Q4 2025	0.002	33	0	0	0.49	0.01	7.2	0.04	0.02	322	-	-	<2.0
7.	GW7	Baseline	0.001	40	0	0	0.06	0.03	7.7	0.15	-	-	-	-	-
		Q4 2025	0.001	24	0	0	0.67	0.02	7.2	0.05	0.01	355	-	-	<2.0
8.	GW8	Baseline	0.003	26	0	0	0.34	0.01	7.3	0.14	-	-	-	-	-
		Q4 2025	0.001	27	0	0	0.44	0.01	7.3	0.07	0.02	289	-	-	<2.0
Package 3															
Satkhira- Rupsha TL															
9.	GW9	Baseline	0		0	0	0.51	0.04	7.5	0.86		1290	650	22.6	BDL*
		Q4 2025	0.003	287	0	0	0.05	0.03	8.2	0.67		1200			

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hard-ness	Temp-erature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
10.	GW10	Baseline	0		0	0	0.18	0.07	7.2	1.05		1560	520	23.4	BDL*
		Q4 2025	0.003	382	0	0	0.21	0.03	8.3	0.95		1790			
11.	GW11	Baseline													
		Q4 2025	0.002	12	0	0	0.08	0.03	8.2	0.89		1386			
12.	GW12	Baseline													
		Q4 2025	0.001	243	0	0	0.07	0.03	8.1	0.67		1070			
Satkhira- Manirampur TL															
13.	GW13	Baseline							7.3	0.52		1370	560	22.5	243
		Q4 2025	0.002	303	0	0	2.28	3.25	8.2	0.64		1389			
14.	GW14	Baseline							7	0.14		1450	480	22.2	176
		Q4 2025	0.002	27	0	0	0.1	0.03	8.3	0.34		475			
15.	GW15	Baseline							7.7	0.28		1620	690	21.9	258
		Q4 2025	0.001	18	0	0	0.23	0.43	8.2	0.18		321			
Kushtia- Meherpur TL															
16.	GW16	Baseline	0.01		0	0	0.033	0.07	7.59	0.38		730	128	22.7	BDL*
		Q4 2025	0.004	76	0	0	0.15	0.05	8.2	0.39		756			
17.	GW17	Baseline	0		0	0	0.01	0.02	7.6	0.33		720	117	23.2	BDL*
		Q4 2025	0.001	16	0	0	0.31	1.41	8.3	0.16		243			
18.	GW18	Baseline	0.01		0	0	0.54	0.01	7.75	0.33		660	134	23.5	BDL*
		Q4 2025	0.004	19	0	0	0.12	0.37	8.1	0.18		294			
19.	GW19	Baseline	0.01		0	0	0.55	0.02	7.71	0.3		620	109	23.1	BDL*
		Q4 2025	0.001	18	0	0	0.17	0.47	8.3	0.15		279			
20.	GW20	Baseline	0		0	0	0.07	0.05	7.68	0.29		680	91	23.4	BDL*
		Q4 2025	0.002	15	0	0	0.14	0.21	8.3	0.13		234			

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hard-ness	Temp-erature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
Package 4															
Bagerhat-Pirojpur-Bhandaria TL															
21.	GW21	Baseline	0	-	0	0	0.8	0.08	7.8	0.6	-	3.1			
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Purba Sadipur- Domar TL															
22.	GW22	Baseline	0	-	0	0	-	-	7.2	0.04	-	-	106	22.4	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Niamatpur- Patnitola TL															
23.	GW23	Baseline	0.01	-	0	0	0.16	0.04	-	0	-	-	-	-	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Gopalganj-Shibchar TL															
24.	GW24	Baseline	0	-	0	0	-	-	-	0.1	-	480	150	-	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Domar-Hatibandha TL															
25.	GW25	Baseline	0	-	0	0	0.14	0.08	7.2	0	-	132	-	22.4	-
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS	NYS
Package 5															
400/230 kV GIS Substation at Kaliganj, Gazipur															
26.	GW26	Baseline	0.002	21	-	-	1.3	0.02	7.1	-	0.04	231	-	-	-
		Q4 2025	0.006	41	0	0	0.43	0.04	7.1		0.05	257	-	-	-
27.	GW27	Baseline	0.002	19	-	-	1.1	0.03	7.3	-	0.02	257	-	-	-
		Q4 2025	0.008	45	0	0	0.49	0.03	7.1		0.07	252	-	-	-
28.	GW28	Baseline	0.001	19	-	-	1.1	0.02	7.3	-	0.03	234	-	-	-
		Q4 2025	0.006	51	0	0	0.45	0.02	7.2		0.06	279	-	-	-

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hard-ness	Temp-erature	TPH
			mg/L	mg/L	N/100ml	N/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
29.	GW29	Baseline	0.001	20	-	-	1.2	0.02	7.2	-	0.03	237	-	-	-
		Q4 2025	0.009	37	0	0	0.52	0.05	7.2		0.05	224	-	-	-
Package 6															
400/230/132 KV GIS Substation at Purbachal															
30.	GW30	Baseline	0.001	17	-	-	1.2	0.03	7.2	-	0.02	241	-	-	-
		Q4 2025	0.007	39	0	0	0.47	0.05	7.1	-	0.06	281	-	-	-
31.	GW31	Baseline	0.001	15	-	-	1.3	0.03	7.1	-	0.03	247	-	-	-
		Q4 2025	0.009	42	0	0	0.41	0.04	7.2	-	0.05	308	-	-	-
32.	GW32	Baseline	0.002	18	-	-	1.1	0.02	7.4	-	0.03	239	-	-	-
		Q4 2025	0.006	44	0	0	0.41	0.04	7.2	-	0.05	259	-	-	-
33.	GW33	Baseline	0.001	16	-	-	1.2	0.03	7.3	-	0.03	246	-	-	-
		Q4 2025	0.007	33	0	0	0.51	0.05	7.1	-	0.06	278	-	-	-
Package 7															
34.	GW34	Baseline	<0.01	24	0	-	0.244	0.148	6.84	-	0.81	395.31	-	-	-
		Q4 2025	0.003	32	0	0	0.6	0.02	7.5	0.14	1.43	518	-	-	-
35.	GW35	Baseline	0.097	3.4	0.27	-	0.685	4.6	6.6	-	3.8	11	-	-	-
		Q4 2025	0.002	27	0	0	0.8	0.03	7.2	0.26	1.37	479	-	-	-
36.	GW36	Baseline	<0.01	16	0		0.076	0.068	6.9	-	0.98	283.71	-	-	-
		Q4 2025	0.002	19	0	0	0.9	0.04	7.1	0.21	2.01	555	-	-	-
37.	GW37	Baseline	<0.01	21	0		0.167	0.085	6.96	-	1.41	218.68	-	-	-
		Q4 2025	0.003	18	0	0	1.3	0.01	7.3	0.23	1.19	482	-	-	-
38.	GW38	Baseline	<0.01	19	0		0.091	0.098	6.84	-	1.51	332.22	-	-	-
		Q4 2025	0.002	37	0	0	0.6	0.03	7.5	0.2	1.55	499	-	-	-
Bd Standard			**0.05**	**250**	**0**	**0**	**0.3-1.0**	**0.4**	**6.5-8.5**	**-**	**5**	**-**	**500**	**20-30**	**-**

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 7)
BDL= Below Detection Limit
NYS- Not yet submitted

3.3.3 Soil Quality

3.3.3.1 Sampling Methods

79. Soil samples were collected from Package 1, 2, 3, 4, 5, 6 and 7 locations. 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 1- 7 locations

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
Package 1				
1.	SQ1	Near T-1/0	23°55'52.432"N 90°34'1.233"E	20.12.2025-21.12.2025
2.	SQ2	Near T-4/0	23°57'30.432"N 90°34'1.233"E	
3.	SQ3	Near T-3/0	23°57'10.719"N 90°33'18.541"E	
4.	SQ4	Near T-2/3	23°56'49.0829"N 90°33'26.216"E	
5.	SQ5	Near T-2/1	23°56'20.645"N 90°33'34.799"E	
Package 2				
Rampura- Bashundhara 132kV Underground Cable Line				
6.	SQ6	Hospital, Near the Substation Area in Bashundhara Residential Area	23.81656N 90.43605E	10.08.2025
7.	SQ7	Mosque, Near United International University	23.80374N 90.44242E	
8.	SQ8	Mosque, Near the Substation Area	23.76747N 90.42981E	
Package 3				
Satkhira- Rupsha TL				
9.	SQ9	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	17.12.2025-18.12.2025
10.	SQ10	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	
11.	SQ11	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	
12.	SQ12	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	
Satkhira- Manirampur TL				
13.	SQ13	Magura, Satkhira	22.741249 N, 89.091239 E	19.12.2025-20.12.2025
14.	SQ14	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	
15.	SQ15	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	
Kushtia- Meherpur TL				
16.	SQ16	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	20.12.2025-21.12.2025
17.	SQ17	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
18.	SQ18	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	
19.	SQ19	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	
20.	SQ20	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
21.	SQ21	T-5/0	23°18'4.91"N 90°2'57.73"E	03.05.2025
Purba Sadipur- Domar TL				
22.	SQ22	T-8/0	25°51'37.67"N 88°43'50.66"E	09.05.2025
Niamatpur- Patnitola TL				
23.	SQ23	T-4/0	25°48'31.21"N 88°41'25.45"E	15.05.2025
Gopalganj-Shibchar TL				
24.	SQ24	Near Ap 08	23°19'50.42"N 90° 5'27.58"E	21.05.2025
Domar-Hatibandha TL				
25.	SQ25	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				
26.	SQ26	Hafej Sheikh's House	23.968768 N; 90.549979 E	06.09.2025-07.09.2025
27.	SQ27	Beside Kaliganj- Kapasia Rd. located near Nolir Bridge	23.966955 N; 90.549420 E	
28.	SQ28	Beside the Bridge of Mohani Fuldi Road	23.967744 N; 90.553671 E	
29.	SQ29	Beside the Late Abdul Razzak's House	23.969622 N; 90.552497 E	
Package 6				
400/230/132 KV GIS Substation at Purbachal				
30.	SQ30	In front of Dulal Mia's house	23.864784 N; 90.476049 E	11.08.2025-12.08.2025
31.	SQ31	In front of Dipak Chakraborty's Shop	23.865711 N; 90.475979 E	
32.	SQ32	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.863131 N; 90.476066 E	
33.	SQ33	Beside Mohadev Karmakar's house	23.863318 N; 90.476336 E	
Package 7				
34.	SQ34	Near 132/33 kV GIS substation at Phultola	22°55'27.87"N 89°29'8.40"E	08.09.2025-10.09.2025
35.	SQ35	Near 230/132/33 kV GIS substation at Rupsha	22°46'22.90"N 89°37'1.00"E	
36.	SQ36	Near 132/33 kV GIS substation at Maheshpur	23°47'26.34"N 88°40'43.78"E	
37.	SQ37	Near 132/33 kV GIS substation at Meherpur	23°20'39.91"N 88°55'25.94"E	
38.	SQ38	Near 132/33 kV GIS substation at Manirampur	22°58'35.65"N 89°13'45.54"E	

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 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

80. 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: Environmental Monitoring Pictures and Annexure-33: Environmental Monitoring Lab Sheet.

81. Soil quality monitoring was conducted at representative locations within all project packages to evaluate any potential contamination arising from construction activities such as excavation, material storage, fuel handling and equipment operation. Soil samples were collected from Packages 1 to 7 (SQ1–SQ38) and analyzed for key parameters including pH, organic matter, moisture content, electrical conductivity, heavy metals (lead, cadmium, chromium, zinc), and oil and grease, and the results were compared against the Bangladesh Environment Conservation Rules (ECR), 2023 for soil quality.

82. Soil quality in Package-1 was monitored at SQ1–SQ5 during the baseline and Q4-2025 periods and compared with applicable Bangladesh and international guideline values. In Q4-2025, pH (6.4–7.7) at all locations was within the acceptable range, indicating neutral to slightly alkaline soil conditions. Concentrations of copper (0.06–0.09 mg/L), lead (9–18 mg/L), cadmium (0.18–0.28 mg/L), and chromium (24–35 mg/L) remained well below the guideline limits shown in the table, while organic carbon content (1.21–1.62%) was within the typical range for cultivated soils. Compared with baseline values, metal concentrations generally showed a marked reduction, suggesting no accumulation associated with project activities. Overall, soil quality in Package-1 during Q4-2025 remained compliant with applicable standards and indicates no significant project-related contamination during the reporting period..

83. Soil monitoring in Package-2 showed that pH values (7.3–7.6) remained within the normal range. Copper (0.53–0.71 mg/kg), lead (3.94–4.29 mg/kg), cadmium (0.05–0.07 mg/kg) and chromium (4.93–8.58 mg/kg) in Q4-2025 were well below the Dutch Target and Bangladesh guideline values, and organic carbon remained within the natural soil background range. This confirms that trenching and underground cable installation did not cause soil contamination in Package-2.

84. Soil quality in Package-3, covering the Satkhira–Rupsha, Satkhira–Manirampur and Kushtia–Meherpur transmission line corridors, was monitored at SQ9–SQ20 during the baseline and Q4-2025 periods. The results show that soil pH remained within a neutral range (7.5–8.2), which is suitable for construction and vegetation. Copper, lead, cadmium and chromium concentrations in Q4-2025 were within acceptable limits and below the Dutch Target and Bangladesh soil quality guideline values at all locations. Organic carbon content also remained within the natural background range. Overall, no soil contamination was detected in Package-3, indicating that transmission line construction activities did not adversely affect soil quality.

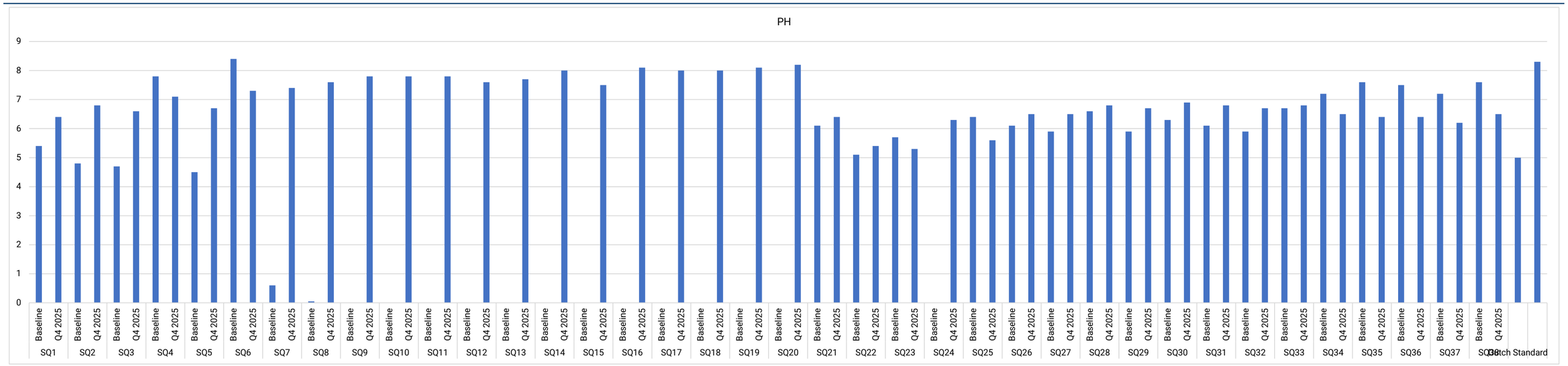
85. Soil samples collected from SQ26–SQ29 during the baseline and Q4-2025 showed that soil pH (6.5–6.8) remained within a slightly acidic to neutral range. Copper, lead, cadmium and chromium concentrations in Q4-2025 were within acceptable limits and below the Dutch Target and Bangladesh soil quality guideline values. Organic carbon content remained within natural background levels. Overall, no soil contamination was observed in Package-5, indicating that substation construction activities did not degrade soil quality.

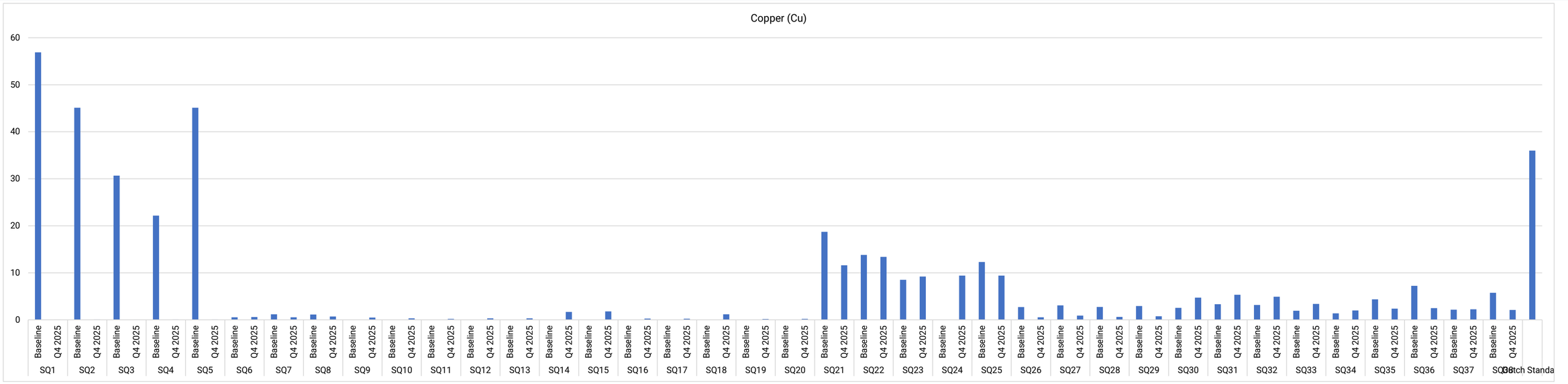
86. Soil quality in Package-6 was monitored at SQ30–SQ33. Soil pH (6.7–6.9) remained within a normal range. Heavy metals (Cu, Pb, Cd and Cr) in Q4-2025 were below Dutch Target and Bangladesh soil guideline values, and organic carbon remained within the natural background range. These results confirm that construction activities at the Purbachal GIS substation did not cause soil contamination during the reporting period.

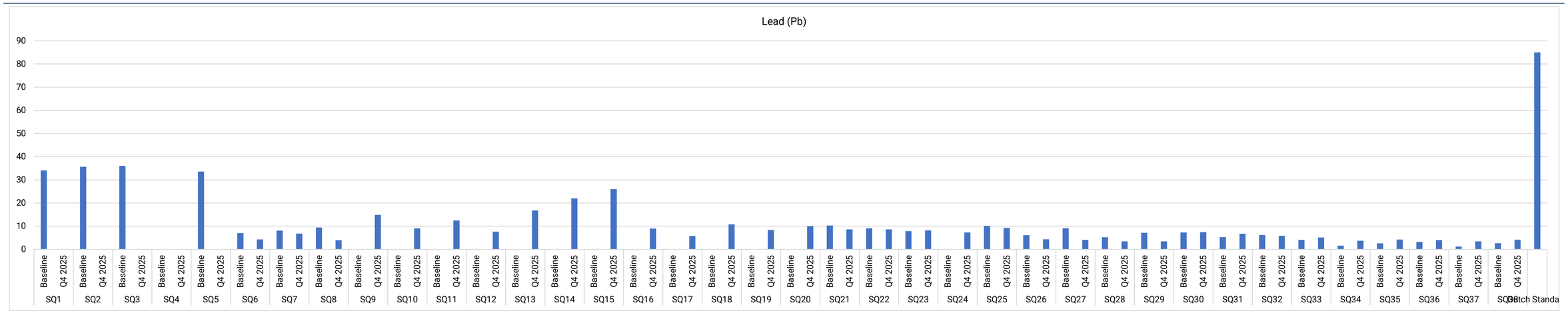
Soil quality in Package-7 was monitored at SQ34–SQ38 during the baseline and Q4-2025 periods. The results show that soil pH (6.2–6.7) remained within the normal range, indicating suitable soil conditions. Copper (1.98–2.23 mg/kg), lead (3.42–4.20 mg/kg), cadmium (0.35–0.47 mg/kg) and chromium (25.67–34.91 mg/kg) in Q2-2025 were all below the Dutch Target Values (Cu 36, Pb 85,

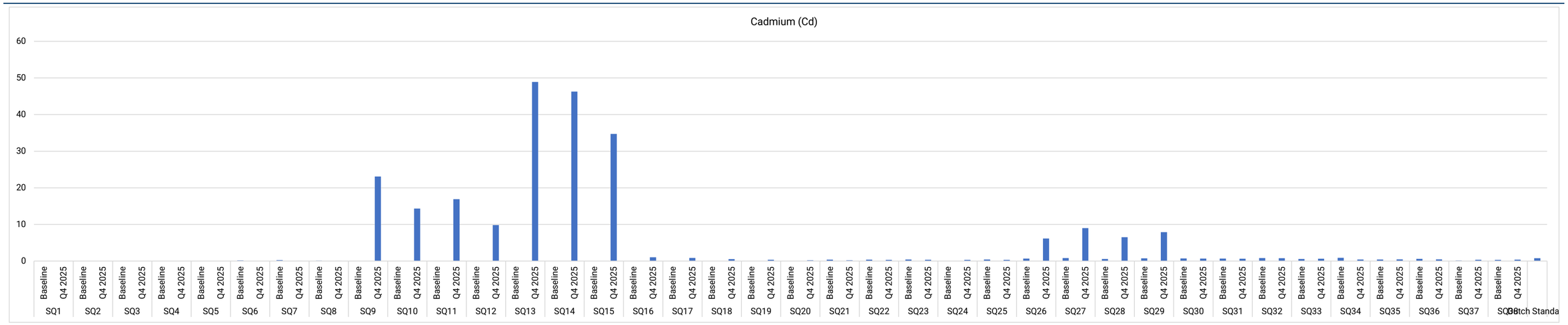
Cd 0.8 and Cr 100 mg/kg), indicating no soil contamination. Organic carbon content remained within natural background levels. Overall, soil quality in Package-7 complied with Dutch soil standards and showed no evidence of contamination during the reporting period.

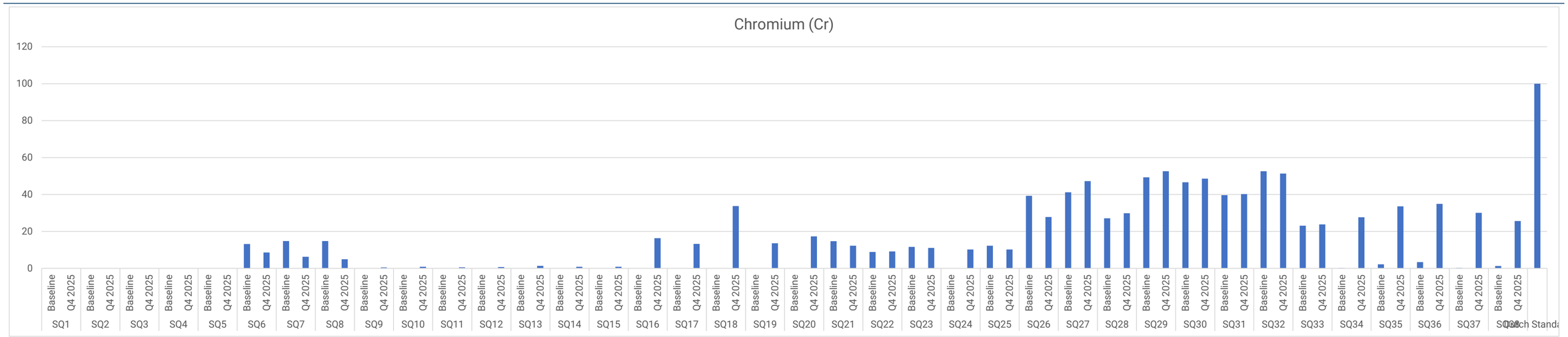
Figure 3-5: Soil Quality Analysis Results in Package 1- 7 project locations








Cadmium (Cd)
60
50
40
30
20
10
0
Baseline
Q4 2025
SQ1
SQ2
SQ3
SQ4
SQ5
SQ6
SQ7
SQ8
SQ9
SQ10
SQ11
SQ12
SQ13
SQ14
SQ15
SQ16
SQ17
SQ18
SQ19
SQ20
SQ21
SQ22
SQ23
SQ24
SQ25
SQ26
SQ27
SQ28
SQ29
SQ30
SQ31
SQ32
SQ33
SQ34
SQ35
SQ36
SQ37


Chromium (Cr)
120
100
80
60
40
20
0
Baseline
Q4 2025
SQ1
SQ2
SQ3
SQ4
SQ5
SQ6
SQ7
SQ8
SQ9
SQ10
SQ11
SQ12
SQ13
SQ14
SQ15
SQ16
SQ17
SQ18
SQ19
SQ20
SQ21
SQ22
SQ23
SQ24
SQ25
SQ26
SQ27
SQ28
SQ29
SQ30
SQ31
SQ32
SQ33
SQ34
SQ35
SQ36
SQ37

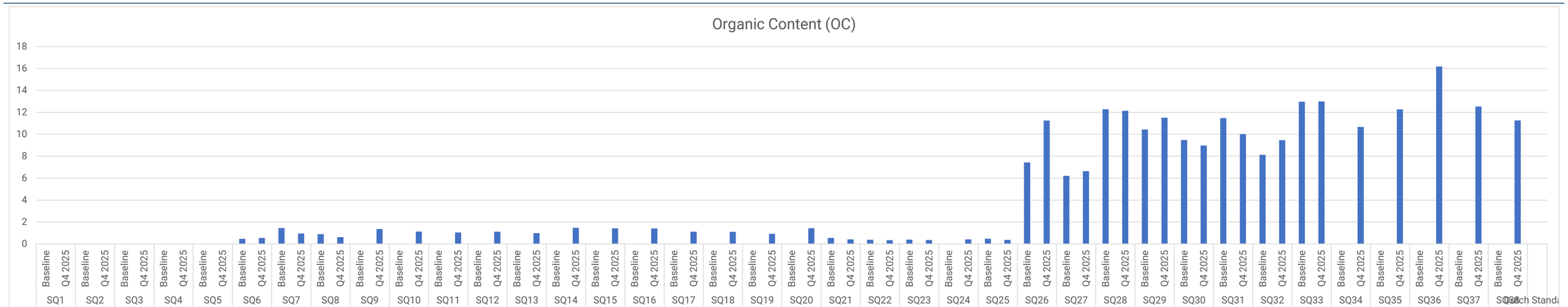

Organic Content (OC)
18
16
14
12
10
8
6
4
2
0
Baseline
Q4 2025
SQ1
SQ2
SQ3
SQ4
SQ5
SQ6
SQ7
SQ8
SQ9
SQ10
SQ11
SQ12
SQ13
SQ14
SQ15
SQ16
SQ17
SQ18
SQ19
SQ20
SQ21
SQ22
SQ23
SQ24
SQ25
SQ26
SQ27
SQ28
SQ29
SQ30
SQ31
SQ32
SQ33
SQ34
SQ35
SQ36
SQ37

Table 3-11: Soil Quality Analysis of Package 1- 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 1								
1.	SQ1	Baseline	5.4	56.9	34.08			
		Q4 2025	6.4	0.06	18	0.18	24	1.21
2.	SQ2	Baseline	4.8	45.11	35.65			
		Q4 2025	6.8	0.08	11	0.22	35	1.35
3.	SQ3	Baseline	4.7	30.68	36.01			
		Q4 2025	6.6	0.07	15	0.2	32	1.28
4.	SQ4	Baseline	7.8	22.17	0.05			
		Q4 2025	7.1	0.09	9	0.28	29	1.62
5.	SQ5	Baseline	4.5	45.11	33.59			
		Q4 2025	6.7	0.08	12	0.24	31	1.47
Package 2								
Rampura- Bashundhara 132kV Underground Cable Line								
6.	SQ6	Baseline	8.4	0.53	7.03	0.18	13.15	0.46
		Q4 2025	7.3	0.6	4.29	0.05	8.58	0.54
7.	SQ7	Baseline	0.6	1.18	8.13	0.26	14.81	1.45
		Q4 2025	7.4	0.53	6.82	0.07	6.31	0.95
8.	SQ8	Baseline	0.05	1.13	9.45	0.1	14.81	0.89
		Q4 2025	7.6	0.71	3.94	0.06	4.93	0.62
Package 3								
Satkhira- Rupsha TL								
9.	SQ9	Baseline						
		Q4 2025	7.8	0.47	14.9	23.09	0.49	1.36
10.	SQ10	Baseline						
		Q4 2025	7.8	0.32	9.08	14.35	0.83	1.13
11.	SQ11	Baseline						
		Q4 2025	7.8	0.2	12.48	16.89	0.57	1.04
12.	SQ12	Baseline						
		Q4 2025	7.6	0.32	7.65	9.8	0.75	1.11
Satkhira- Manirampur TL								

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
13.	SQ13	Baseline						
		Q4 2025	7.7	0.32	16.8	489.12	1.36	0.98
14.	SQ14	Baseline						
		Q4 2025	8	1.68	22.03	46.27	0.88	1.47
15.	SQ15	Baseline						
		Q4 2025	7.5	1.78	25.98	34.72	0.86	1.42
Kushtia- Meherpur TL								
16.	SQ16	Baseline						
		Q4 2025	8.1	0.26	9.02	1.03	16.34	1.41
17.	SQ17	Baseline						
		Q4 2025	8	0.22	5.79	0.87	13.26	1.11
18.	SQ18	Baseline						
		Q4 2025	8	1.17	10.8	0.52	33.74	1.1
19.	SQ19	Baseline						
		Q4 2025	8.1	0.17	8.37	0.34	13.57	0.92
20.	SQ20	Baseline						
		Q4 2025	8.2	0.21	10.02	0.23	17.33	1.43
Package 4								
Bagerhat-Pirojpur-Bhandaria TL								
21.	SQ21	Baseline	6.1	18.7	10.3	0.39	14.7	0.54
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS
Purba Sadipur- Domar TL								
22.	SQ22	Baseline	5.1	13.8	9.1	0.38	8.9	0.38
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS
Niamatpur- Patnitola TL								
23.	SQ23	Baseline	5.7	8.5	7.9	0.44	11.6	0.39
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS
Gopalganj-Shibchar TL								
24.	SQ24	Baseline						
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS
Domar-Hatibandha TL								
25.	SQ25	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
		Q4 2025	NYS	NYS	NYS	NYS	NYS	NYS
Package 5								
400/230 kV GIS Substation at Kaliganj, Gazipur								
26.	SQ26	Baseline	6.1	2.71	6.12	0.68	39.32	7.43
		Q4 2025	6.5	0.55	4.36	6.17	27.81	11.25
27.	SQ27	Baseline	5.9	3.07	9.12	0.83	41.23	6.21
		Q4 2025	6.5	0.89	4.12	8.99	47.23	6.64
28.	SQ28	Baseline	6.6	2.74	5.23	0.57	27.12	12.28
		Q4 2025	6.8	0.61	3.43	6.52	29.88	12.14
29.	SQ29	Baseline	5.9	2.93	7.13	0.76	49.32	10.43
		Q4 2025	6.7	0.75	3.45	7.88	52.58	11.51
Package 6								
400/230/132 KV GIS Substation at Purbachal								
30.	SQ30	Baseline	6.3	2.54	7.31	0.72	46.63	9.47
		Q4 2025	6.9	4.71	7.45	0.69	48.56	8.97
31.	SQ31	Baseline	6.1	3.34	5.31	0.67	39.63	11.47
		Q4 2025	6.8	5.33	6.76	0.65	40.19	10.02
32.	SQ32	Baseline	5.9	3.17	6.21	0.81	52.61	8.12
		Q4 2025	6.7	4.92	5.87	0.78	51.35	9.46
33.	SQ33	Baseline	6.7	1.93	4.11	0.57	23.14	12.97
		Q4 2025	6.8	3.39	5.11	0.64	23.81	12.99
Package 7								
34.	SQ34	Baseline	7.2	1.37	1.59	0.89	0.23	0.68%
		Q4 2025	6.5	1.98	3.71	0.41	27.68	10.67
35.	SQ35	Baseline	7.6	4.36	2.61	0.41	2.19	0.83%
		Q4 2025	6.4	2.38	4.25	0.45	33.59	12.27
36.	SQ36	Baseline	7.5	7.23	3.24	0.61	3.4	0.84%
		Q4 2025	6.4	2.5	3.99	0.47	34.91	16.18
37.	SQ37	Baseline	7.2	2.16	1.21	0.13	0.32	0.80%
		Q4 2025	6.2	2.23	3.42	0.35	30.11	12.53
38.	SQ38	Baseline	7.6	5.76	2.66	0.31	1.27	0.88%
		Q4 2025	6.5	2.11	4.2	0.38	25.67	11.26

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
Dutch Standards[9]			**5-8.3**	**36**	**85**	**0.8**	**100**	**-**

Source: Periodic Environmental Baseline Monitoring Report July- December 2025 (Package 1- 7)

BDL= Below Detection Limit

NYS- Not yet submitted

[9] Dutch Target and Intervention Values, 2000

4 ENVIRONMENTAL SUPERVISION AND MONITORING RESULTS

During the reporting period, regular environmental and EHS inspections were conducted to verify EMP and CESMP compliance and to track recurring minor issues such as dust control, waste handling, fuel storage, PPE use, and housekeeping. Corrective actions were issued to contractors and followed up through subsequent visits to confirm closure. Table 4-1 summarizes the inspection dates, locations, key issues identified, and their resolution status.

Table 4-1: Environmental Supervision

SN	Date	Type and Purpose of the Visit	Location(s) Visited	EA, IA, Consultant Staff Participating	Key Issues Identified	Corrective Actions and Follow-up	Status
1	21.07.2025	Physical environmental and EHS inspection	Satkhira–Rupsha TL	EQMS experts, Contractor EHS staff, Power Grid	Dust generation along access roads; incomplete PPE use	Water spraying intensified; toolbox talk conducted	Closed
2	22.07.2025	Physical environmental and EHS inspection	Satkhira–Manirampur TL	EQMS experts, Contractor EHS staff, Power Grid	Uncovered material stockpiles; missing warning signs	Stockpiles covered; signage installed	Closed
3	28.07.2025	Physical environmental and EHS inspection	Kushtia–Meherpur TL	EQMS experts, Contractor EHS staff, Power Grid	Fuel drums without secondary containment	Spill trays provided; storage reorganized	Closed
4	04.08.2025	Environmental and EHS supervision	Packages-5 & 6 Substations	EQMS experts, Contractor EHS staff, Power Grid	Drainage obstruction; scattered scrap materials	Debris removed; drainage channels cleared	Closed
5	02.09.2025	Environmental and EHS inspection	Niamatpur–Patnitola TL	EQMS experts, Contractor EHS staff, Power Grid	Temporary traffic congestion near villages	Flagmen deployed; traffic plan reinforced	Closed
6	05.09.2025-07.09.2025	Environmental and EHS supervision	Purba Sadipur–Domar & Domar–Hatibandha TL	EQMS experts, Contractor EHS staff, Power Grid	Inconsistent dust control during dry weather	Additional water bowsers mobilized	Closed

SN	Date	Type and Purpose of the Visit	Location(s) Visited	EA, IA, Consultant Staff Participating	Key Issues Identified	Corrective Actions and Follow-up	Status
7	27.09.2025	Environmental and EHS inspection	Manirampur Substation	EQMS experts, Contractor EHS staff, Power Grid	Incomplete boundary fencing and access control	Boundary wall completed; access points secured	Closed
8	24.09.2025	Environmental and EHS inspection	Phultola Substation	EQMS experts, Contractor EHS staff, Power Grid	Waste segregation bins missing	Bins installed; waste removal arranged	Closed
9	24.09.2025	Environmental and EHS inspection	Rupsha Substation	EQMS experts, Contractor EHS staff, Power Grid	Noise complaints during concrete works	Work rescheduled to daytime; silencers fitted	Closed
10	24.12.2025	Environmental and EHS inspection	Packages-2, 5 & 6	EQMS experts, Contractor EHS staff, Power Grid	Minor housekeeping gaps; incomplete registers	Site cleaned; logs updated	Closed

4.1 Budget for EMP Implementation

EMP implementation budgets for selected packages are summarized in the table above. Packages 01, 03, and 04 have approved allocations for social and environmental services of BDT 5,389,362; BDT 4,568,918; and BDT 931,552, respectively. However, as of December 2025, no claims had been submitted by the contractors for these packages, leaving the full approved amounts unutilized. For the remaining packages, the EMP implementation cost has not been specified as a separate line item in the price schedule and has instead been incorporated within the overall contract price. In cases where EMP costs are identified separately, the contractors have indicated their intention to submit claims for the full amount only after completion of their respective contractual scopes.

Table 4-2: Budget for EMP Implementation

Package No.	Approved Budget for Social and Environmental Services as per Contract (BDT)	Claim Submitted by the Contractor till December, 2025 (BDT)	Balance Amount (BDT)
01	5,389,362	0.00	5,389,362
03	4,568,918	0.00	4,568,918
04	931,552	0.00	931,552

4.2 Labor Management

87. During the reporting period, contractors across Packages 1–7 implemented labor management and occupational health and safety measures in compliance with applicable national labor legislation of Bangladesh and the requirements of the Asian Development Bank's Safeguard Policy Statement (2009). Contract provisions prohibiting child labor and forced labor, ensuring non-discrimination, and promoting safe working conditions were verified through site inspections and document reviews conducted by Power Grid and the supervision consultants.

88. Field observations confirmed the application of health and safety practices consistent with internationally recognized guidelines, including provision and use of personal protective equipment, availability of first-aid facilities at active work fronts, display of emergency contact information, toolbox talks, and controlled access to hazardous areas. Examples recorded during the reporting period include verification of stocked first-aid boxes and maintained treatment registers at Kaliganj and Purbachal substations, updated PPE issue logs at transmission line camps under Packages-3 and 4, and attendance sheets for safety briefings at Rupsha and Phultola substations. Supporting evidence is provided in Annexure- 27: Health and safety Checklist (Health and Safety Checklist), Annexure-29: PPE Inventories (PPE Inventories), Annexure-30: Incident Register (Incident Register), Annexure 36: Land Handed Over to The Landowners After Completing Transmission Line Tower Erection and Stringing (Worker Resting Schedule), and Annexure-17: EHS and Other Training and Attendance List of the Training (Training Attendance Lists).

4.3 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

Location	Key wastes	Collection Method	Disposal Options
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	Monirul Islam, GCC	01717444650
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

Waste generation during the July–December 2025 reporting period was recorded through package-wise monthly waste inventory sheets included in Annexure-21: Waste Inventory and Site Clearance from All Solid Waste. The quantities shown in Table 4-6 represent approximate cumulative amounts aggregated from these records across active transmission line and substation packages. Disposal routes primarily involved reuse at site, transfer to municipal waste dealers or authorized municipal

contractors for non-hazardous wastes, and handover to licensed recyclers or hazardous-waste handlers where applicable, in accordance with the approved EMP and national regulatory requirements.

Table 4-5: Types of Material/ Waste

Sl. No.	Type of Material / Waste	Approximate Amount	Unit	Source / Package	Disposal / Destination
1	Piling mud / slurry	~600–800	m^3	Pile foundation works (Pkgs-1,3,4,6)	Municipal waste dealer / approved dumping area
2	Excavated soil / spoil	~1,200–1,500	m^3	Tower & substation civil works	Reused on site; excess to municipal waste dealer
3	Scrap steel / conductor bits	~0.8–1.2	ton	Tower erection yards	Authorized recycler
4	Plastic waste	~450–500	kg	Camps & substations	Municipal waste dealer
5	Cement bags	~700–900	nos	Substation construction	Municipal waste dealer / recycler
6	Carton / packing boxes	~250–300	kg	Equipment delivery areas	Municipal waste dealer
7	Used hand gloves	~300–400	pairs	Construction fronts	Municipal waste dealer
8	PP rope / binding material	~350–450	kg	TL works	Municipal waste dealer
9	Printing cartridges	~25–30	nos	Site offices	Authorized hazardous-waste handler
10	Oily rags / lubricant containers	~120–150	kg	Equipment yards	Authorized hazardous-waste handler
11	Domestic solid waste (food, paper, packaging)	~6–8	ton	Labor camps	Municipal waste dealer
12	Treated sewage wastewater	~15–18	kL	Labor camps	Municipal contractor
13	Wastewater / sludge	~12–15	kL	Camps & batching yards	Municipal contractor

4.4 Environmental Health and Safety

During reporting period (July– December 2025), toolbox trainings (TBT) were conducted in Package 1, 3, 4,5,6 and 7 and details of the TBT mentioned in Table 4-6. TBT attendance sheet was given in Annexure 31.

Table 4-6: TBT Imparted During July– December 2025 in DWZTGEP

Month	No. of TBT Conducted						No. of Participants						Remarks
	P1	P3	P4	P5	P6	P7	P1	P3	P 4	P5	P6	P7	
Jul-25	-	66	55	16	11	3	-	210	120	187	143	40	Attendance list depicted in Annexure-31: TBT Participant List
Aug-25	-	77	40	17	13	3	-	255	80	277	140	36	
Sep-25	-	65	30	20	18	2	-	218	70	246	173	26	
Oct-25	-	40	36	22	18	3	-	210	80	277	189	47	
Nov-25	8	77	38	22	20	3	87	255	90	256	221	35	
Dec-25	13	88	36	20	18	2	109	255	84	213	205	33	
Total	21	413	235	117	98	16	196	1403	524	1456	1071	217	

4.5 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 1, 3, 4, 5, 6 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 well maintained at every site
Workers Welfare	Safety and hygiene of the workplace are well maintained	Package 1, 3, 4, 5, 6 and 7	Ensure safe and hygiene workplace,	Drinking water test reports were not found at any site	Drinking water test reports should be collected from the vendor and available at every site of all packages
PPE Inventories	PPE inventories are available in construction sites and substations. Some workers were found working without PPE	Package 1, 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 1, 3, 4, 5, 6 and 7during Jul- Dec 2025 have been depicted in Annexure-29: PPE Inventories
Medical and First Aid Provision	First Aid facilities and MoU with local hospital are available for all construction sites and substations	Package 1, 3, 4, 5, 6 and 7	First Aid facilities and MoU with local hospital should be	No actions required during reporting period	

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
			available for all construction sites and substations		
Community Health and Safety	Segregated waste bins are present, Vehicular movements are managed with proper scheduling and limited speed.	Package 1, 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 1, 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: Ensuring OHS and Emergency Contact Information)
Incidents	Near miss and minor incident	Package 1, 3, 4, 5, 6 and 7	Proper PPE should be well maintained befor work. Training on OHS and First aid should given to the workers regularly. Pre breifing should be initiated at all sites Training on proper and safe working techniques should be conducted regularly for all workers	Recovered with proper medication and one day rest	16 cases of near miss occurred in Package 1, 4, 5, 6 and 7 (Annexure-30: Incident Register)

4.6 Meaningful Consultation and Grievance Redress

89. The PMU keeps records of all the grievances in a site-specific logbook (Annexure-16: Complain Logbook and Leaflets) 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 (Jul- Dec 2025). Consultation pictures are shown in Annexure-18: Community Engagement. A total of six (6) community-level consultation meetings were conducted across Dhaka, Domar, Jhenaidah, Khulna–Satkhira, and Madaripur. Overall, 22 participants attended the consultations, all of whom were male. No female participants were recorded during these consultations.

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

Package	Cumulative no. of consultation conducted till Inception to December 2025	Cumulative no. of participant till Inception to December 2025		
		Male	Female	Total
Package 3	51	408	0	408
Package 4	43	385	0	385
Package 5	4	42	0	42
Package 6	4	37	0	37
Package 7	15	144	0	144

Table 4-9: Consultation meetings held during July– December 2025

Package	Consultation Date	Location	Consultation Type	Issue discussed	No. of Participants
Package 3 and 4	13.07.2025	Jhenaidah	FGD with local communities	Compensation, Occupancy of additional land, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc. Dust Generation during dry season, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc. Noise pollution and sometimes roads get partially damaged due to heavy vehicle movement	3
	09.11.2025	Domar	FGD with local communities		5
	09/08/2025	Madaripur	FGD with local communities		3
	08/12/2025	Khulna Satkhira	FGD with local communities		4
Package 5 and 6	24.11.2025	Kaliganj and Purbachal	FGD with local communities and Workers	Dust Generation during dry season, Movement Disturbances, Gender Violence, Grievances, Livelihoods, etc.	12

Package	Consultation Date	Location	Consultation Type	Issue discussed	No. of Participants
				Noise pollution and sometimes roads get partially damaged due to heavy vehicle movement	

4.6.1 Findings of the Consultations

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

Stakeholders	Findings
Local People, Landowners, Sharecroppers and Workers	• Participants confirmed that compensation for tower footing areas is important and should be implemented in accordance with government procedures. • Participants stated that crop losses are mainly seasonal and temporary. • Participants mentioned that construction activities may cause temporary disturbances, including restricted access to farmland, noise, and movement of construction vehicles. • Participants acknowledged that no permanent displacement or relocation would occur due to the project. • Participants appreciated the engagement and consultation with local community members. • Participants requested advance notification prior to construction activities near agricultural land. • Participants emphasized the need for regular and transparent communication between the project team and the community.

4.7 Training and Awareness Activities

91. PIU has conducted day-long training on EHS for contractors of package- 1, 3, 4, 5, 6 and 7 as well as its own staff through the experts from EQMS Consulting Ltd (Annexure-17: EHS and Other Training and Attendance List of the Training). 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: EHS and Other Training and Attendance List of the Training.

Table 4-10: Summary of training programs initiated Since Inception to December 2025

Package	Cumulative no. of training program Since Inception to December 2025	Cumulative no. of participant Since Inception to December 2025		
		Male	Female	Total
Package 1	9	96	0	96
Package 2	23	241		241
Package 3	48	766	0	766
Package 4	186	1678	0	1678
Package 5	18	1155	0	1155
Package 6	18	798	0	798

Package	Cumulative no. of training program Since Inception to December 2025	Cumulative no. of participant Since Inception to December 2025		
		Male	Female	Total
Package 7	30	756	0	756

Table 4-11: Details of training programs imparted during July– December 2025

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Package 2					
Gang Induction	02.11.2025	Worker	12	0	12
Fire Fighting Training	6.11.2025	Staff and Worker	13	0	13
EHS Induction	06.11.2025	Fitter, Helper, etc.,	10	0	10
Electrical Training	13.12. 2025	Staff and Worker	15	0	15
Package 3					
Gang Induction	12.07.2025	Worker	15	0	15
Fire Fighting Training	10.08.2025	Staff and Worker	12	0	12
EHS Induction & Height Work Training	8.21.2025	Fitter	18	0	18
EHS Induction	15.09.2025	Fitter, Helper, etc.,	14	0	14
EHS Induction	16.10.2025	Fitter, Helper, etc.,	16	0	16
Staff Induction	11.11. 2025	Staff	4	0	4
Electrical Training	13.10. 2025	Staff and Worker	15	0	15
Gang Induction	24.11. 2025	Worker	11	0	11
Fire Fighting Training	23.12. 2025	Staff and Worker	10	0	10
Package 4					
Mechanical handling	06.07.2025	Staff and Worker	10		10
Fire Fighting Training	21.07.2025	Staff and Worker	19		19
Environmental Aspect	18.07.2025	Staff and Worker	10		10
Store housekeeping training	10.07.2025	Staff and Worker	10		10
POSH awareness training	24.04.2025	Staff and Worker	10		10
Work at height training	25.07.2025	fitter	10		10
First aid training	30.07.2025	Staff and Worker	4		4
Traffic Rule	29.08.2025	Staff and Worker	7		7
Store housekeeping training	19.08.2025	Staff and Worker	17		17
T&P Inspection training	13.08.2025	Staff and Worker	10		10
Dengue and malaria awareness training	23.08.2024	Fitter, Helper, etc.	20		20
manual material handling	18.08.2025	Fitter, Helper, etc.	10		10
GBV Awareness training	28.08.2025	Staff and Worker	13		13

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
POSH Awareness training	21.08.2025	Staff and Worker	10		10
Store housekeeping training	2.09.2025	Staff and Worker	8		8
Work at height training	03.09.2025	Staff and Worker	10		10
Manual material handling training	09.09.2025	Staff and Worker	8		8
GBV Awareness training	24.09.2025	Fitter, Helper, etc.	16		16
POSH Awareness training	25.09.2025	Fitter, Helper, etc.	10		10
Work at height training	10.10.2025	Fitter	10		10
Prevention from snake training	10.10.2025	Staff and Worker	10		10
IMS awareness training	21.04.2024	Staff and Worker	6		6
Housekeeping training	21.10.2025	Staff and Worker	10		10
BBS Awareness training	24.04.2024	Fitter, Helper, etc.	15		15
Fire Fighting Training	02.10.025	Staff and Worker	10		10
Power tools handling training	21.011.2025	Staff and Worker	10		10
Hydra inspection training	15.11.2025	Staff and Worker	10		10
GBV Awareness training	15.11.2025	Staff and Worker	10		10
PDCA cycle awareness training	22.11.2025	Staff and Worker	10		10
T&P inspection awareness training	14.11.2025	Fitter, Helper, etc.,	10		10
Manual material handling	04.11.2025	Staff	10		10
Package 5					
Gang Induction	07.07.2025	Staff and Worker	65		65
Fire Fighting Training	21.08. 2025	Staff and Worker	60		60
EHS Induction	10.07. 2025	Fitter	55		55
EHS Induction	23.09. 2025	Fitter, Helper, etc.,	67		67
EHS Induction	10.09.2025	Fitter, Helper, etc.,	75		75
Staff Induction	13.10. 2025	Staff	68		68
Electrical Training	05.11. 2025	Staff and Worker	69		69
Gang Induction	09.11. 2025	Staff and Worker	75		75
Fire Fighting Training	17.12.2025	Staff and Worker	87		87
Package 6					
Gang Induction	09.07.2025	Staff and Worker	47		47
Fire Fighting Training	15.08.2025	Staff and Worker	52		52
EHS Induction	11.07.2025	Fitter	46		46
EHS Induction	03.08.2025	Fitter, Helper, etc.,	42		42
EHS Induction	09.09.2025	Fitter, Helper, etc.,	51		51

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Staff Induction	15.10.2025	Staff	48		48
Electrical Training	15.08.2025	Staff and Worker	44		44
Gang Induction	24.12.2025	Staff and Worker	55		55
Fire Fighting Training	10.11.2025	Staff and Worker	50		50
Package 7					
Gang Induction	08.07.2025	Staff and Worker	32		23
Fire Fighting Training	19.07.2025	Staff and Worker	23	0	23
EHS Induction	21.07.2025	Fitter	12	0	12
EHS Induction	18.08.2025	Fitter, Helper, etc.	24	0	24
EHS Induction	24.09.2025	Fitter, Helper, etc.	27	0	27
Staff Induction	25.09.2025	Staff	13	0	13
Electrical Training	30.09.2025	Staff and Worker	21	0	21
Gang Induction	02.10.2025	Staff and Worker	32	0	32
Fire Fighting Training	19.10.2025	Staff and Worker	32	0	32
Electrical Training	13.11.2025	Staff and Worker	21	0	21
Electrical Training	23.11.2025	Staff and Worker	21	0	21
Electrical Training	06.12.2025	Staff and Worker	21	0	21

4.8 Status of CAP Raised by ADB

92. 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-23: Status of CAP) 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.	Complied	CSEMP of package 1 approved by PMU (Annexure 12 SSEMP for Package 1)
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 oil seeping transformer of Bagerhat substation has been replaced by the GMD (Annexure-34). Other substations are under package-8 and no work has commenced in those.
4	Carbon Emissions Reporting	Calculate and report annual CO_2 emission reductions as per PDMF through EMRs.	Not Complied	Method of correlating project activities and annual CO_2 emission reductions not established.
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: Status of CAP.
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 35.
7	Oil Spill Prevention	Install secondary containment systems at all locations with potential oil leakage.	Complied	Secondary containers installed (Annexure-23: Status of CAP)
8	Noise Management	Implement noise control measures to ensure levels remain below 85 dBA during piling.	Complied	Ear plugs were available at sites specially for the workers who are working in >85dBA zone (while working with generator, metal

Sl. No.	Observation Area	Recommended Corrective Action	Status	Remarks
				cutting machine, etc.) and also added in PPE inventory mentioned in Annexure-29: PPE Inventories
9	Tree Plantation Plan (TPP)	Prepare and implement a comprehensive TPP; update and report the tree inventory in EMR.	Being Complied	TPP preparation of packges-1, 3 and 4 are under progress
10	EHS Monitoring Frequency	Ensure monthly EHS site monitoring by EQMS or designated parties across all packages.	Complied	EHS monitoring was conducted in monthly basis during this reporting period by EQMS
11	EMP Compliance	Improve waste management, fencing, PPE usage, and ensure emergency contacts are posted especially in Packages 3, 5, and 6.	Complied	Proper PPE being used at all sites (Annexure-23: Status of CAP)
12	Environmental Quality Testing	Conduct periodic environmental quality tests for Packages 3, 4, 5, 6, and 7 as per IEE/CESMP.	Complied	Periodic environmental quality monitoring conducted for all packages
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	Salinity, TPH, Temperature, and Hardness were not tested for Package 5,6 and 7. The contractors have been notified to include these parameters in the next monitoring report.
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 37: Good Practices
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: Health and safety Checklist
16	EMR Reporting Quality	Improve EMR structure to include response matrix actions, signed checklists, performance data, and training logs.	Complied	EQMS is trying to improve the EMR with the help and suggestions of ESU team of Power Grid

Among the 16 ADB recommended corrective actions eleven (11) considerations are compiled and four (04) 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 January- June 2026

Sl.	Recommended Corrective Measures	Responsibility	Package (P)	Implementation Timeline
1.	Calculate and report annual CO_2 emission reductions as per PDMF through EMRs.	ADB/PMU/EQMS	P1, P2, P3, P4, P5, P6 and P7	January- June 2026
2.	Complete retrofitting works (impermeable bunds) at Bagerhat, Bhandaria, Purba Sadipur, and Niamatpur substations.	Power Gird's O&M Division	P8	January- June 2026
3.	Prepare and implement a comprehensive TPP; update and report the tree inventory in EMR.	PMU/EQMS/EPC Contractors	P1, P2, P3, P4, P5, P6 and P7	January- June 2026
4.	Perform testing for Total Coliform, Fecal Coliform, Salinity, TPH, Temperature, and Hardness for ground water quality.	Contractor	P2, P3, P4, P5, P6 and P7	January- June 2026

4.9 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: Status of CAP of the Existing Substations.

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

Sl. No.	Substation Name	Issue Identified During Audit	Responsible GMD	Action Plan Ref. & Date	Corrective Measures Required	Target Completion Date	Evidence	Current Status
1.	Purba Sadipur	Poor yard housekeeping and inadequate waste storage	Khulna GMD	GMD-PSD-01 / 12.08.2025	Switchyard cleaning; designated waste storage area; improved drainage	30.09.2025	Annexure-34: Status of CAP of the Existing Substations	Closed
		Lack of impermeable bund for oil-containing equipment	Khulna GMD	GMD-PSD-02 / 12.08.2025	Retrofitting oil containment bund (110% capacity)	31.12.2025	Annexure-34: Status of CAP of the Existing Substations	Ongoing
2.	Kushtia	Yard cleanliness and segregation of wastes	Kushtia GMD	GMD-KUS-01 / 18.07.2025	Cleaning works; labeled waste bins installed	31.08.2025	Annexure-34: Status of CAP of the Existing Substations	Closed
		Inadequate oil-spill prevention facilities	Kushtia GMD	GMD-KUS-02 / 18.07.2025	Provision of drip trays; oil-handling SOP enforced	31.12.2025	Annexure-34: Status of CAP of the Existing Substations	Ongoing
3.	Bagerhat	Switchyard housekeeping and scrap storage	Bagerhat GMD	GMD-BAG-01 / 22.07.2025	Removal of scrap; routine cleaning program	15.09.2025	Annexure-34: Status of CAP of the Existing Substations	Closed

Sl. No.	Substation Name	Issue Identified During Audit	Responsible GMD	Action Plan Ref. & Date	Corrective Measures Required	Target Completion Date	Evidence	Current Status
		Transformer oil leakage and bunding upgrades	Bagerhat GMD	GMD-BAG-02 / 22.07.2025	Replacement of leaking transformer; bund retrofitting	31.12.2025	Annexure-34: Status of CAP of the Existing Substations	Ongoing
4.	Bhandaria	Poor storage of hazardous and non-hazardous materials	Barishal GMD	GMD-BHA-01 / 05.09.2025	Separate storage zones; spill kits provided	30.10.2025	Annexure-34: Status of CAP of the Existing Substations	Closed
		Inadequate oil-containment systems	Barishal GMD	GMD-BHA-02 / 05.09.2025	Installation of impermeable bunds	31.12.2025	Annexure-34: Status of CAP of the Existing Substations	Ongoing
5.	Niamatpur	Oil handling areas lacked secondary containment	Rangpur GMD	GMD-NIA-01 / 18.09.2025	Install spill trays and retrofit bunds around transformers	31.12.2025	Annexure-34: Status of CAP of the Existing Substations	Ongoing
		Poor segregation of hazardous and general waste	Rangpur GMD	GMD-NIA-02 / 18.09.2025	Provide labeled bins; training for operators	31.10.2025	Annexure-34: Status of CAP of the Existing Substations	Closed
6.	Satkhira	Yard clutter and temporary scrap accumulation	Khulna GMD	GMD-SAT-01 / 25.08.2025	Scrap removal; routine housekeeping schedule	30.09.2025	Annexure-34: Status of CAP of the Existing Substations	Closed
		Inadequate oil-spill response equipment	Khulna GMD	GMD-SAT-02 / 25.08.2025	Provide spill kits; refresher training	30.11.2025	Annexure-34: Status of CAP of	Closed

Sl. No.	Substation Name	Issue Identified During Audit	Responsible GMD	Action Plan Ref. & Date	Corrective Measures Required	Target Completion Date	Evidence	Current Status
							the Existing Substations	

4.10 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 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: Land Handed Over to The Landowners After Completing Transmission Line Tower Erection and Stringing
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: Waste Inventory and Site Clearance from All Solid Waste
3.	There was no secondary container found for preventing oil spillage from pipes	Complied	Secondary Container was installed for the sites (Annexure-23: Status of CAP)
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: PPE Inventories.
5.	Inappropriate Grievance Box placement	Complied	Grievance Box was placed in right order Annexure-23: Status of CAP
6.	No progress on the tree plantation plan (TPP)	Being Complied	TPP preparation of packges-1, 3 and 4 are under progress Annexure 38: Comments Responses on TPP of Package 3

4.11 Good Practices During July– December 2025

93. During the reporting period, several good environmental and social practices were implemented across the project sites, demonstrating the commitment of the project proponent and contractors toward environmental sustainability, community engagement and responsible construction.

94. Tree plantation activities were carried out at multiple locations along the project corridors, including Nilphamari and Rangpur areas, where contractors and local community members, including children, actively participated in planting saplings. These plantation drives contributed to compensatory afforestation, improved local greenery and enhanced community awareness about environmental protection. The involvement of local residents in these activities helped strengthen community ownership and support the project.

95. Community consultation and engagement were also conducted regularly. Meetings with local stakeholders, landowners and community representatives were organized to explain project activities, discuss temporary impacts and agree on mitigation measures. Compensation and

support were provided to affected households in a transparent manner, which helped maintain good community relations and reduced the likelihood of disputes during construction.

96. Proper handling and storage of construction materials and hardware such as bolts, clamps and fittings were observed at several sites. Materials were systematically arranged on tarpaulins and platforms to prevent soil contamination, loss of components and unsafe working conditions. This practice contributed to better site housekeeping, reduced waste generation and improved worker safety.

97. River-crossing activities were carefully managed using boats to transport workers and equipment, thereby avoiding disturbance to river banks and aquatic habitats. This method minimized the need for temporary access to roads and helped reduce impacts on water bodies and surrounding ecosystems.

98. Environmental and safety awareness programs were conducted for workers and supervisors, including toolbox meetings and training sessions. These sessions emphasized safe working practices, environmental protection, waste management and emergency response. Such initiatives helped improve compliance with environmental and occupational health and safety requirements at construction sites.

99. Special events such as project coordination meetings and community gatherings were also organized in an orderly and safe manner, with proper seating, sanitation and documentation. These gatherings facilitated information sharing, stakeholder coordination and monitoring of project progress in a transparent environment (Annexure 37: Good Practices).

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4.12 Performance Level on Environmental Supervision and Monitoring Result During July– December 2025

100. 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 to be moderately satisfactory (4). PMU is working on the considerations mentioned in CAP and will be complied with the CAP during the next reporting period.

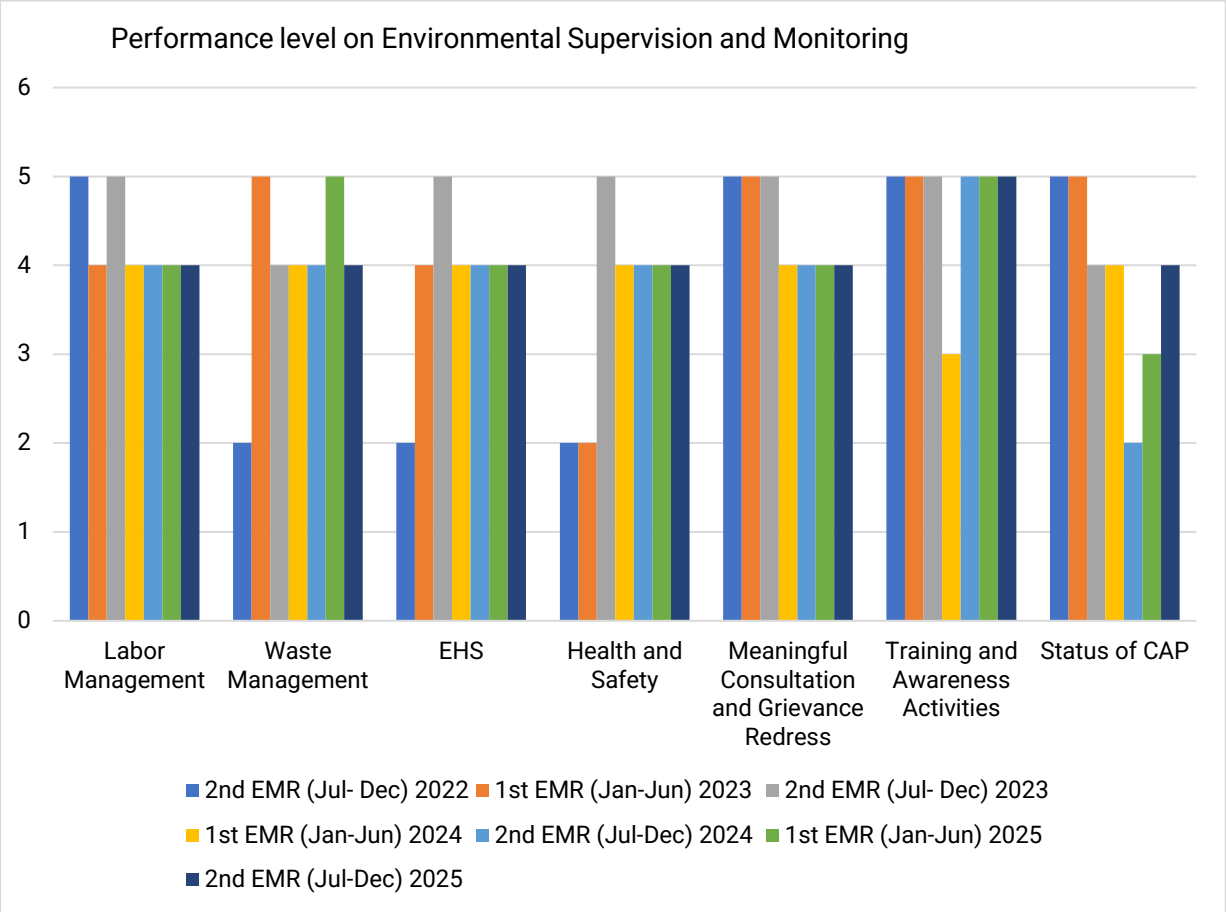
101. Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR results are mentioned in Table 4-16.

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

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

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

102. Implementation of the Dhaka and Western Zone Transmission Grid Expansion Project (DWZTGEP) continued to progress steadily during the July–December 2025 reporting period, with construction activities underway in all active packages and several components nearing completion. Environmental management and safeguard compliance were implemented in accordance with the Initial Environmental Examination (IEE), Environmental Management Plan (EMP), Corrective Action Plans (CAP) and the requirements of the ADB Safeguard Policy Statement (2009) and Bangladesh Environment Conservation Rules (ECR), 2023. Environmental Clearance Certificate (ECC) issued by the Department of Environment remains valid up to 26 July 2026, and all contractors are operating under approved CESMPs for their respective packages

103. Environmental quality monitoring carried out for air, noise, surface water, groundwater and soil demonstrated that, overall, the project remains environmentally acceptable. Noise levels, soil quality, and most water quality parameters complied with applicable standards. However, elevated particulate matter (PM_{10} and $PM_{2.5}$) above IFC guideline values was observed at several construction-intensive locations, particularly in Packages 2, 3, 4, 5 and 6, mainly due to earthworks, unpaved roads and heavy vehicle movement. Surface water quality exceedances in terms of BOD, COD and low DO were recorded in some locations of Package-2 and at isolated points in Packages 5 and 6, while groundwater iron levels exceeded drinking water standards in parts of Packages 5 and 6. These issues have been addressed through a detailed Corrective Action Plan for January-June 2026 to ensure progressive compliance with both national and international standards.

104. Environmental supervision, waste management, occupational health and safety, and community engagement activities were actively implemented across the project. The Grievance Redress Mechanism (GRM) remained functional, with one grievance received and resolved during the reporting period and no outstanding cases. A total of 77 training sessions and 6 consultation meetings were conducted, strengthening awareness among workers and communities on environmental protection, safety and social safeguards

105. Several good practices were also observed, including tree plantation and compensatory afforestation, orderly material storage, controlled river crossings, regular community consultations, and safety and environmental awareness programs, which contributed positively to project sustainability and community acceptance.

106. In conclusion, while certain localized and temporary environmental issues were identified during the reporting period, the overall environmental performance of DWZTGEP remains satisfactory and in line with the approved safeguard framework. With the implementation of the proposed corrective actions and continued monitoring, the project is expected to achieve full compliance and support the safe, sustainable and timely completion of the transmission lines and substations.

ANNEXURE

Annexure-1: Renewal of Environmental Clearance Certificate

Government of the People's Republic of Bangladesh
Department of Environment
Head Office
Poribesh Bhaban, E-16, Agagaon, Sher-E-Banglanagar, Dhaka-1207
www.doe.gov.bd

Environmental Clearance (Renewal)
Clearance No: 22.02.0000.018.072.007.25.145

This Environmental clearance of the following the Industry/Project named below has been renewed under the terms and conditions specified herein:

Name of Industry/Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Entrepreneur	: Md. Abul Kashem
Identification No	: 161012
Industry/Project Activities	: ২ কি.মি. ৪০০ কেভি সঞ্চালন লাইন নির্মাণ; ১৪৪ কি.মি. ২৩০ কেভি সঞ্চালন লাইন নির্মাণ; ২৪২ কি.মি. ১৩২ কেভি সঞ্চালন লাইন নির্মাণ; ২ টি ৪০০ কেভি, ৩টি ২৩০কেভি এবং ১০ টি ১৩২ কেভি জিআইএস গ্রিড উপকেন্দ্র নির্মাণ; বিদ্যমান ৯টি ১৩২/৩৩ কেভি উপকেন্দ্রে ২০ টি ১৩২ কেভি বে-এক্সটেনশন।
Industry/Project Category	: Red
Industry/Project Address	: Grid Bhaban, Level-9, Avenue-3, Jahurul Islam City, Aftabnagar, Dhaka-1212
Date of Issue	: 05 October 2025
Date of Expiry	: 26 July 2026

The terms and conditions attached separately with this Clearance must be complied. Failure to comply with any condition of this clearance may result in penalties, suspension or revocation of the Clearance.

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/1DIlJYg-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, counselling 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 অব বাংলাদেশ লিঃ
POWER GRID COMPANY OF BANGLADESH LTD.
(An Enterprise of Bangladesh Power Development Board)

Ref. No.:27.21.0000.453.06.001.21.122 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.

4/3/2021

(Md. Sharfuddin Hossain)
Project Director (CE)
Dhaka & Western Zone Transmission
Grid Expansion Project
Mobile No: 01713850419

Copy to:

1. *Managing Director, PGCB*
2. *Executive Director (P&D/O&M/Finance), PGCB.*
3. *Chief Engineer, (P&D), PGCB*
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 presented in Semi-annual SMR, July-December 2025.

Annexure-9: Waste Collection and Separation

	
Store of Package 4 (Bagerhat)	Package 5
	
Package 3 (11/2 TL SRTL)	Package 7 (Rupsha SS)

Annexure-10: Covering of Construction Materials

	
Rupsha Substation (Package 7)	4/1 SMTL (Package 3)

	
Package 5	Phultala Substation (Package 7)

Annexure-11: Ensuring OHS and Emergency Contact Information



Package 3 (SMTL)

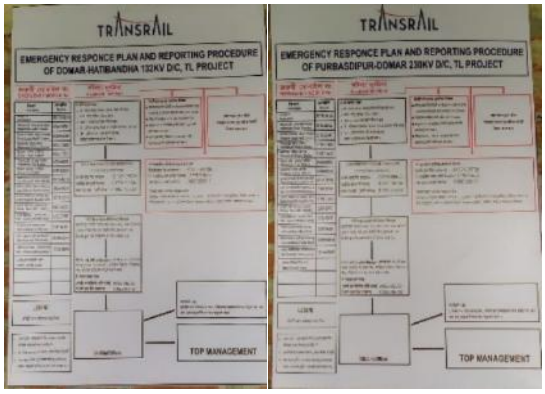
Package 4 (Gopalganj and Purbasadipur to Domar TL)



Satkhira Substation (Package 7)



Manirampur Substation (Package 7)



Package 4 (Bagerhat Store & Nilphamari Store)



Package 6





First aid box at construction sites of Package 4 (5/1 Domar Hatibandha TL and Package 3 (8/0 (Kushtia- Meherpur TL)



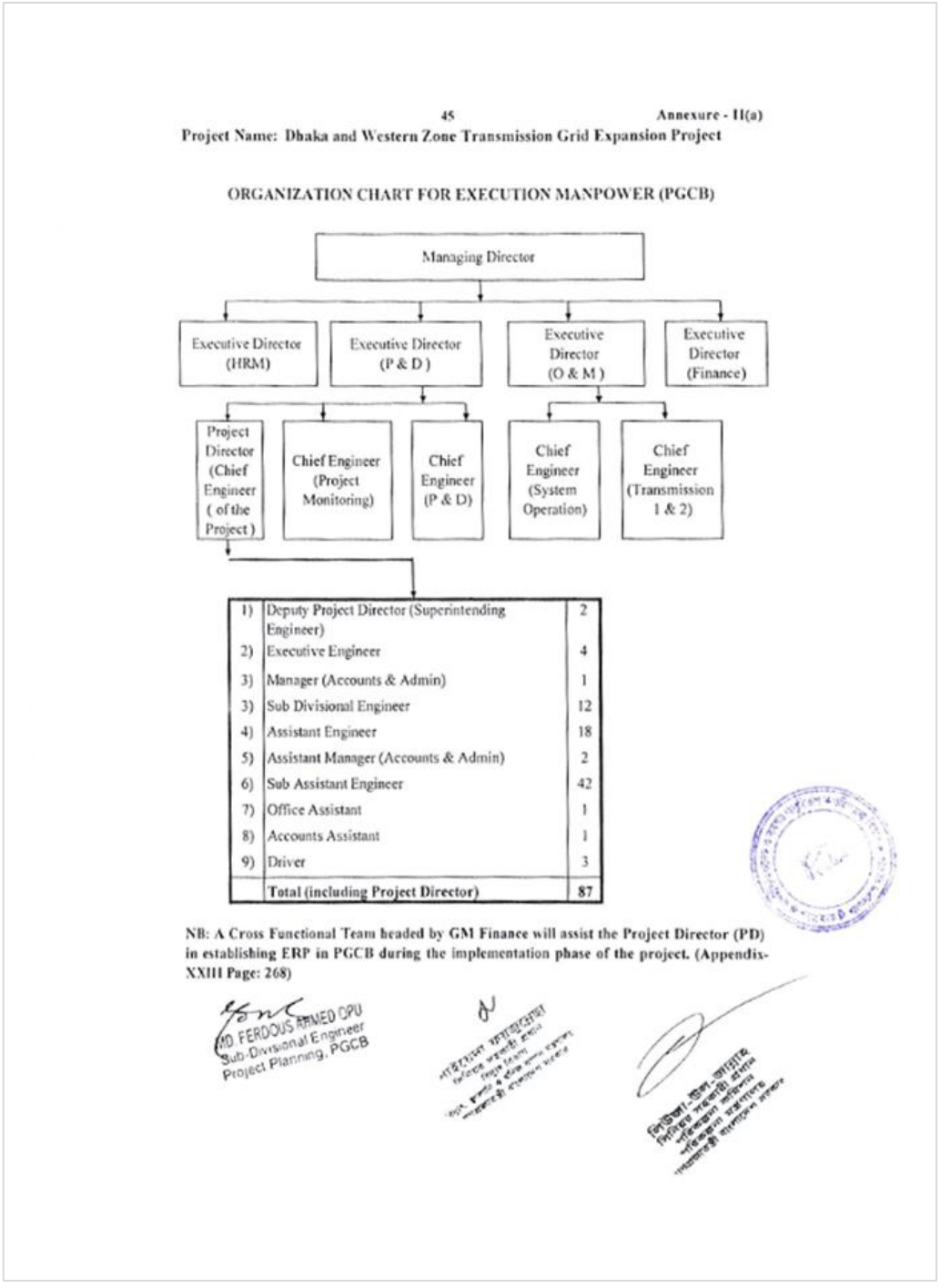


Drinking water facilities at Package 5	Drinking water facilities at Package 4 (11/4 Gopalganj- Shibchar)

Annexure 12 SSEMP for Package 1

Link of SSEMP of Package 1:
https://drive.google.com/file/d/1uNiEC77WcwLflSp6ylTFuZyp4fwA6R38/view?usp=sharing

Annexure-13: PIU Set-Up



45 Annexure - II(a)

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project

ORGANIZATION CHART FOR EXECUTION MANPOWER (PGCB)

1)	Deputy Project Director (Superintending Engineer)	2
2)	Executive Engineer	4
3)	Manager (Accounts & Admin)	1
3)	Sub Divisional Engineer	12
4)	Assistant Engineer	18
5)	Assistant Manager (Accounts & Admin)	2
6)	Sub Assistant Engineer	42
7)	Office Assistant	1
8)	Accounts Assistant	1
9)	Driver	3
	Total (including Project Director)	**87**

NB: A Cross Functional Team headed by GM Finance will assist the Project Director (PD) in establishing ERP in PGCB during the implementation phase of the project. (Appendix-XXIII Page: 268)

MD FERDOUS AHMED OPU
Sub-Divisional Engineer
Project Planning, PGCB

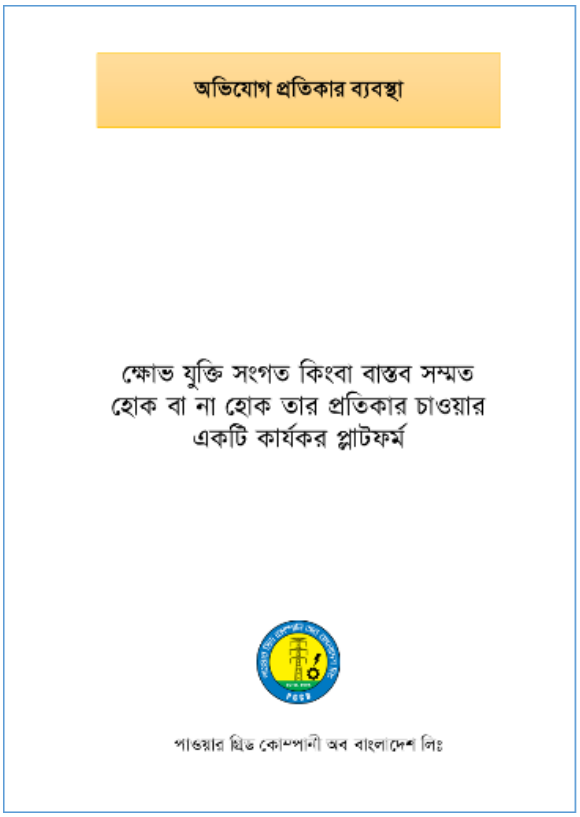
Annexure-14: Link to Baseline Date

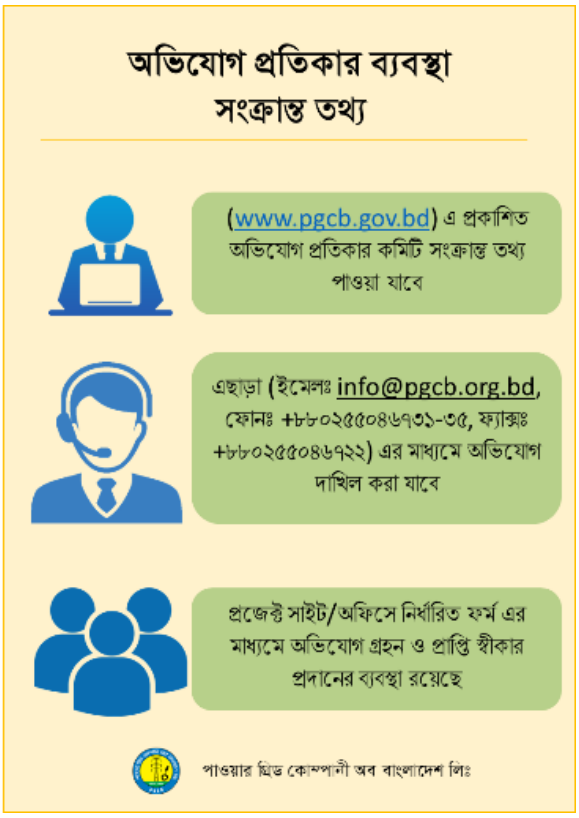
https://drive.google.com/drive/folders/116Pv1_8bc5_ZwPFahPxxvtiOzxm9vo73?usp=sharing

Annexure-15: Link to IEE Addendum

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

Annexure-16: Complain Logbook and Leaflets





Annexure-17: EHS and Other Training and Attendance List of the Training

Package 1







Store of Package 3







Package 4









Package 5





Package 6





Package 7





Training Attendance Sheet

Package 1

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

EHS INDUCTION MEETING ATTENDANCE SHEET

Project Name: Design, Supply, Installation, Testing & Commissioning of 400 KV and 230 KV T/L
Location: Kaligonj, Gazipur
Date: 6.11.2025 **Time:** 9:30 AM

No.	Name of Worker	Designation	Signature
1	Md. Salman mia	Site Engineer	Salman
2	Md. Ab Rolim	Supervisor	
3	Hasmof mia	Lineman	
4	Anower Hossain	〃	
5	Dhiman mistry	〃	Dhiman
6	Nasim	〃	Nasim
7	Afif	〃	
8	Falim	〃	
9	Shakib Hossain	〃	Shakib
10	Rubel mia.	〃	

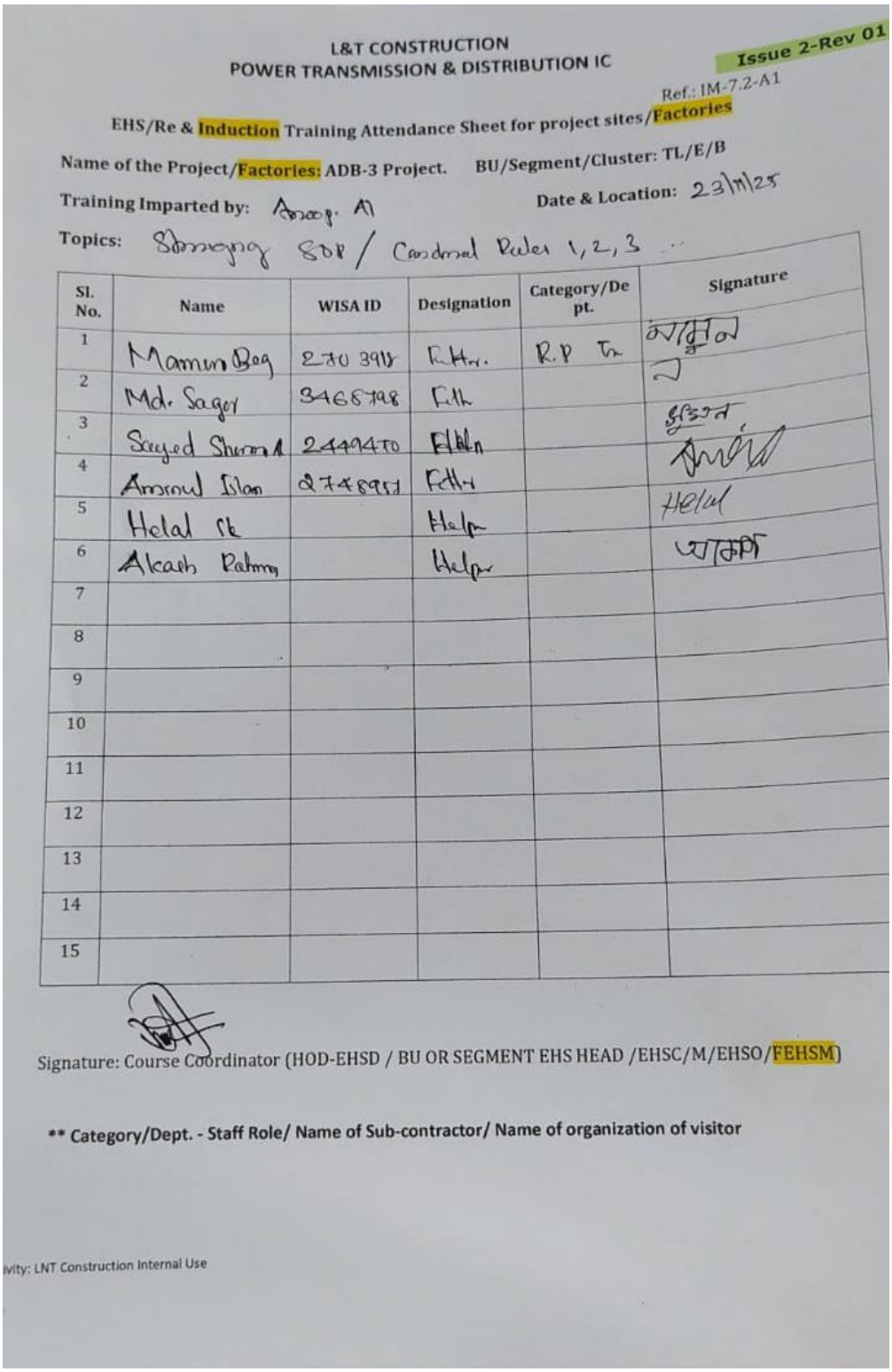
Supervisor / Safety Officer Name: Mohosin 01310027501

Signature: **Date:** 06.11.2025

HANBAEK CO., LTD. hanbaek KOREA

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Package 3



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 01

Ref.: IM-7.2-A1

EHS/Re & Induction Training Attendance Sheet for project sites/Factories

Name of the Project/Factories: ADB-3 Project. BU/Segment/Cluster: TL/E/B

Training Imparted by: Asaqr. Al Date & Location: 23/11/25

Topics: Stamping SOP / Cardinal Rules 1, 2, 3 ...

Sl. No.	Name	WISA ID	Designation	Category/Dept.	Signature
1	Mamun Beg	270 391	Fitter	R.P Tr	
2	Md. Sagor	3468798	Fitter		
3	Sayed Sharif	2499470	Helper		
4	Anwarul Islam	0748951	Fitter		
5	Helal sk		Helper		Helal
6	Akash Patra		Helper		
7					
8					
9					
10					
11					
12					
13					
14					
15					

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

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

ivity: LNT Construction Internal Use

Package 4

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) Venue: - TT/2 Time: From 10AM To 11AM
2) Date of Training: - 6/07/25
3) Details of Training / Awareness: - Mechanical handling.
4) Training by: - K. K. Mahanta / Juel Khan.
5) Topic / Subject covered (in Point)

OPTR Training - OPTR are Trained & Certified to use mechanical handling equipments. Equipment maintenance - Regularly inspect & maintain equipment to prevent mechanical Failures. ★ Calculated the load ★ Ensure the work area is Clear of obsticles & hazards. ★ Benifit of mechanical handling. ★ Increased efficiency ★ Reduce Labourcost ★ Improve safety ★ Reduce Fatigue

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Md. Sujon	Gang Leader	সুজন	
02	Kobir	Rig man	কবির	
03	Jakaria	Rigman	JAKARIA	
04	Shamim	Mason	শামীম	
05	Al Amin	Rig man	আল আমিন	
06	Haidar Ali	Helper	হায়দার	
07	Sujuj	Helper	সুজুজ	
08	Noyon	Mason	নয়ন	
09	Yousuf	Helper	ইউসুফ	
10	Arif	Helper	আরিফ	

For Transrail Lighting Ltd.
Kishore kumar Mahanta
DG. HSE Engineer

CONTROLLED

For JV

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) **Venue:** - 12/0
2) **Date of Training:** - 8/07/25 **Time: From** 11am **To** 11.30am.
3) **Details of Training / Awareness:** - Site house keeping Training.
4) **Training by:** -
5) **Topic / Subject covered (in Point)**

★ Introduction to site house keeping ★ Hazard of Poor house Keeping ★ Site housekeeping Procedures ★ Tools & Equipment Maintenece. ★ waste Managments. ★ personal Responsibility.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Santo Sarkar	Labor	Santo Sarkar	
02	Md. Manik	Labor	মানিক	
03	Narayan Day	Labor	নারায়ণ	
04	Md. Sajjad Islam	Labor	সাজ্জাদ	
05	Md. Jibon Islam	Labor	জীবন	
06	md santo Islam	Labor	সান্তি	

For. Transrail Lighting Ltd
Kishore kumar Mahanta
DG. HSE Engineer

For. Transrail Lighting Ltd

CONTROLLED

Page | 4

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) Venue: - STORE
2) Date of Training: - 22.11.2025 Time: From 10 Am To 10.30Am.
3) Details of Training / Awareness: - PDCA cycle.
4) Training by: - K.N. mahanta.
5) Topic / Subject covered (in Point)

PDCA cycle.
* Plan ⇒ Identify problem/area, issue.
* DO ⇒ Implement plan ⇒ Execute the plan taking small steps initially.
* Check = monitor process ⇒ Analyze data to check progress.
* ACT = Take Action ⇒ Implement changes based on lessons learned.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	M. Alom.	Store Kepper.	Moralam	
02	Amik mondol.	Asst S. Kepper.	Amik	
03	Rubel.	Engineer	Rubel	
04	Nitto Gopal.	"	Nitto	
05	Jubel Islam.	FQA	Jubel	
06	Alomgir Bepari	Labour	Alomgir	
07	Sonto Bepari.	"	Sonto	
08	Alamin.	"	Alamin	
09	Akash.	"	Akash	
10	Emam.	OPTR.	Emam	

HSE Officer / Engineer

Kishore Kumar Mahanta
Assistant Manager (HSE)
Transrail lighting ltd.

Project Manager

CONTROLLED

Page |

CamScanner

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) **Venue: -** 19/4
2) **Date of Training: -** 14.11.25 **Time: From** 11 AM **To** 11:45 AM
3) **Details of Training / Awareness: -** T&P inspection training.
4) **Training by: -** Abdul Mallik / Khairul Bashar.
5) **Topic / Subject covered (in Point)**

* Pre-we-checks: conduct daily inspection before using tools & equipments. * Regular inspections: Schedule periodic inspections to identify wear & tear.

Benifit => Reduce incident, Well Maintain Equipment Operates more efficiently.

Cost Saving: Regular maintenance extends equipment lifespan.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
1.	Md. Robiul	Group leader		
2.	Md. Habibur	Fitter		
3.	Md. Alamgir	D. M		
4.	Md. Monsur	Fitter		
5.	Md. Rejaul	Helper		
6.	Md. Kabir	Fitter		
7.	Md. Saidul	Fitter		
8.	Md. Ripon	Helper		
9.	Md. Shanto	Labour		
10.	Md. Shohel	Labour		

HSE Officer / Engineer

Kishore Kumar Mahanta.
Asst Manager (HSE)
Transrail lighting ltd.

Project Manager

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Page | 4

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TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) **Venue: -** 32/0
2) **Date of Training: -** 22.11.25 **Time: From** 4:30 **To** 5:30pm
3) **Details of Training / Awareness: -** Power tools handling.
4) **Training by: -** K.K. mahanta.
5) **Topic / Subject covered (in Point)**

* Personal protective Equipment * Regularly tools inspection
* proper handling * SOP.
* Stay alert and Focused while operating winch M/c.
* Keep work area clear. Use Right Tools For Right Job.

Benefits => Injury prevention * Increased productivity.
Equipment Logevity.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Md. Tipiob	Helper		
02	Md. Jibon	Fitter		
03	Md. Rony	Fitter		
04	Md. Saju	Fitter		
05	Md. Milon	Labour		
06	Md. kamrul	Helper		
07	Md. Mojedul	Labour		
08	Md. Anamul	Helper		
09	Md. Monirul	Gangleader		
10	Md. Kalam	Labour		

HSE Officer

Kishore Kumar Mahanta
Asst Manager (HSE)
Transrail lighting ltd.

Project Manager

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Page | 4

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Transrail Lighting Limited	**Training Participants Report**	

1) Venue:- T- 31/1
2) Date of Training:- 24.08.25 Time: From 2:15 PM To 3:40 pm
3) Details of Training / Awareness:- Dengue & Malaria
4) Training by:- Mithun Chakma Bordy
5) Topic / Subject covered (In Point)

- ☑ What are Dengue & Malaria ;
- ☑ The mosquito connection ;
- ☑ Symptoms & What to watch for ;
- ☑ Prevention & control ;
- ☑ Treatment & management.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
	[illegible]	Line Man	[signature]	
	[illegible]	〃	[signature]	
	[illegible]	〃	[signature]	
	[illegible]	〃	[signature]	
	[illegible]	〃	[signature]	
	[illegible]	〃	[signature]	
	[illegible]	G.L	[signature]	
	[illegible]	Drawing Master	[signature]	
	[illegible]	Helper	[signature]	
	[illegible]	〃	[signature]	

HSE Officer / Engineer

for [illegible]
Project Manager

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Page | 4

Transrail Lighting Limited

Training Participants Report

1) Venue:- T- 31/1
2) Date of Training:- 27.08.25 Time: From 2:30 PM To 3:45 pm
3) Details of Training / Awareness:- First Aid.
4) Training by:- Mithun Chakma Bordy
5) Topic / Subject covered (in Point)

⇒ Introduction to first aid;
⇒ 4C's of first aid;
⇒ Usages of first aid Kit;
⇒ Incident reporting;
⇒ Psychological first aid.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
	Md. Aslam	Drawing Master		
	Bipul Karmokar	G.L.		
	Md. Nafmul	Line Man		
	Md. Hasan.	"		
	Md. Rakib.	"		
	Rumin Sarkar	"		
	Md. Siam.	"		
	Md. Shakuj	Drawing Master		
	Md. Saiful	Helper		
	Md. Habibur	"		

HSE Officer / Engineer

Project Manager

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Page | 4

Transrail Lighting Limited	Training Participants Report	

1) Venue:- T– 31/1
2) Date of Training:- 25.09.25 Time: From 9:00 AM To 9:50 AM
3) Details of Training / Awareness:- POSH (Prevention of Sexual Harassment)
4) Training by:- Mithun Chakrabarty
5) Topic / Subject covered (In Point)

- ☑ Definition & forms of Sexual harrassment ;
- ☑ Legal framework ;
- ☑ Work place policies & procedure ;
- ☑ Consequences of sexual harrassment ;
- ☑ Recognizing & reporting incidents ;
- ☑ Creating a safe & respectful workplace.

Sr. No	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	বিপুল	G.L	বিপুল	
02	আবজ	D.M	আবজ	
03.	আনোয়ার	Line Man	আনোয়ার	
04	হোসেন	D.M	হোসেন	
05	ইমরান	Line Man	ইমরান	
06	[illegible]	"	[illegible]	
07	[illegible]	"	[illegible]	
08	[illegible]	"	[illegible]	
09.	[illegible]	"	Roni	
10.	[illegible]	"	[illegible]	

HSE Officer / Engineer

Project Manager

CONTROLLED

Page | 4

project name: Dhaka and western zone transmission Grid expansion project (package_05)

Training name: EHS. Induction Training.

Date: 15/09/2025 Time: 8:30AM.

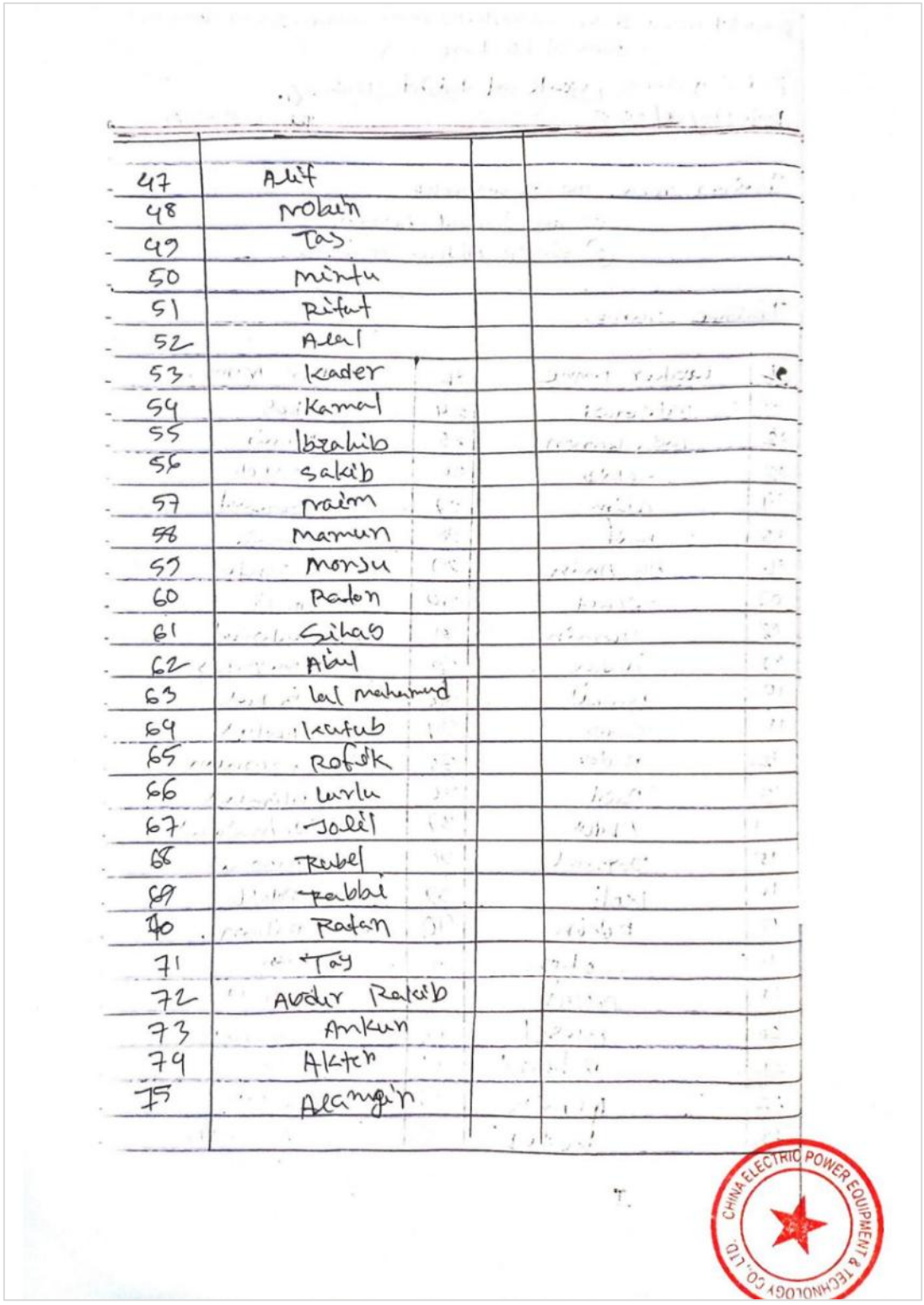
Trainer name: md. Tuser molla.
② md. Forhad Hossen.
③ sazib Ahbab Ankur.

Trainee name:

SL	worker name	SL	worker name.
01	md. Gazi	24	Sukas
02	md. kanon	25	monir
03	Sakib	26	Ashok
04	Alim	27	Samrat
05	Asif	28	Sohid
06	AL- Amin	29	Sanjo
07	Soykot	30	Rafi
08	Hamim	31	Rahmat
09	Abdul	32	Meynhes
10	Ismail	33	Babul
11	Sabuj	34	Ratul
12	Ridoy	35	mamun
13	Asif	36	Alimul
14	Abdur	37	Fahmidul
15	Joynal	38	manul
16	koli	39	Polash
12	Rokon	40	Ribon
18	mohon	41	Hasib
19	robir	42	robur
20	Rusel	43	Alauddin
21	Robbani	44	Rasel
22	Almin	45	Kutub
23	kutub	46	AL-Amin

II

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD



47	Alif		
48	Nobin		
49	Tas		
50	mintu		
51	Rifat		
52	Alal		
53	kader		
54	Kamal		
55	Ibrahib		
56	sakib		
57	raim		
58	mamun		
59	Monju		
60	Rabon		
61	Sihab		
62	Abul		
63	lal mahamud		
64	kutub		
65	Rofik		
66	Lurlu		
67	Jalil		
68	Rubel		
69	Rabbal		
70	Ratan		
71	Tay		
72	Abdur Rakib		
73	Ankun		
74	Akter		
75	Alamgir		

Project name:- Dhaka and western zone Transmission Grid Expansion project (package-05)

Training name: Fire Fighting Training.

Date: 05/08/2025 Time: 8:10 AM

Trainer name: Md. Tusul molla
② md. Forhad Hossion.
③ md. mamun.

Trainee name:

SL	worker name	SL	worker name
01	md. kamon	24	malek
02	mezbul	25	labib
03	Sakib	26	kuddus
04	mir	27	Rahim
05	Alif	28	Tutul
06	Alom	29	Shykot
07	enayet	30	Ismail
08	Rabbi	31	Hamim
09	Rasel	32	Rahim
10	kabir	33	nadir
11	Jahid	34	mehtaj
12	Forhad	35	Rabbi
13	rotul	36	Ariif
14	Abul	37	Sabuj
15	Jotnab	38	Riday
16	Rakibul	39	rotan
17	Rakib	40	Asim
18	Hasan	41	Tanzil
19	kamar	42	monir
20	nadir	43	roman
21	robir	44	Robin
22	Rosul	45	robin
23	Nomin	46	Pase

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 6

Project name: Dhaka and western zone Transmission Grid expantion proj(Package-6)

Training name: Electrical Training.

Date: 15/08/2025 Time: 8:10Am

Trainer name :- Md. Tusar molla.
2, md. Razu Ahmad.
3, Md. Ankur - / RATUL.

Trainee name :-

Sl no	NAME	Sl no	NAME
01	Shoxif	23	Robib
02	Rafan	24	Sagor
03	monju	25	Sobuj
04	sujon	26	Rafik
05	shihab	27	Nitay
06	mamun	28	momin
07	Jakir	29	Sazzad
08	Ikalam	30	Sakil
09	sakil	31	Ayub
10	momin	32	monir
11	Abul	33	Ashok
12	Ikalam	34	Rasel
13	Azad	35	mehedi
14	rahid	36	sabbir
15	Abu	37	Rabiul
16	Bablu	38	Faruk
12	rahid	39	Nirob
18	Tutul	40	Rasul
19	mamud	41	Arif
20	rabir	42	Rabbi
21	rayon	43	Rajob
22	Alam	44	Babu

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

proxect name : Dhaka and western zone transmission Grid expansion project (package-6)
name of Training: Fire Fighting Training
Date: 10/11/25
Time: 9:00AM

SL	List of Trainer
01	md. Tusar molla
02	md. Razu Ahmad
03	md. Forhad Hossain

SL	name of worker	SL	
01	md. Abul	26	Alal
02	md. kalam	27	kalam
03	md. Azad	28	Ibrahib
04	md. Robel	29	Rotul
05	Rabbi	30	Alif
06	Sohel	31	kamal
07	Razu	32	Sazu
08	Sahid	33	Rital
09	Sorif	34	hasan
10	Sobuz	35	Habib
11	Ridoy	36	kutub
12	Rohomatullah	37	Rasel
13	Habib	38	monir
14	Sohag	39	Juwel
15	Arif	40	oyon
16	Jarif	41	Jutin
17	Eran	42	momin
18	royon	43	Hossen
19	Tera	44	Akter
20	Esmail	45	Sakib
21	Jahangir	46	Hobibar
22	hakib	47	minhaz
23	Hakim	48	Sopem
24	kamrul	49	Zahid
25	Suson	50	santo.

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 7

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

EHS INDUCTION MEETING ATTENDANCE SHEET

Project Name: Design, Supply, Installation, Testing & Commissioning of 400 KV and 230 KV T/L
Location: Kaliganj, Gazipur
Date: 6.11.2025 **Time:** 9:30 AM

No.	Name of Worker	Designation	Signature
1	Md. Salman Mia	Site Engineer	Salman
2	Md. Ab Rolim	Supervisor	
3	Hasmof Mia	Lineman	
4	Anower Hossain	"	
5	Dhima mistry	"	Dhiman
6	Nasim	"	Nasim
7	Afif	"	
8	Falim	"	
9	Shakib Hossain	"	Shakib
10	Rubel Mia.	"	

Supervisor / Safety Officer Name: Mohosin 01310027301

Signature: **Date:** 06.11.2025

HANBAEK CO., LTD. hanbaek KOREA

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv 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)

SITE NAME
230/132/33kV GIS Substation at Rupsha

DOCUMENT NAME
Firefighting training Sep-25

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

Firefighting training

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

Date: 20-September-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.

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

Firefighting training sheet

Project Name: 230/132/33 kV Rupsha Sub-station
Date: 20.09.25

Sl no:	Worker Name	Designation	Signature
1	[illegible]	Mason	[illegible]
2	[illegible]	Mason	[illegible]
3	[illegible]	Mason	[illegible]
4	[illegible]	Helper	[illegible]
5	[illegible]	Helper	[illegible]
6	[illegible]	Mason	[illegible]
7	[illegible]	Mason	[illegible]
8	[illegible]	Mason	[illegible]
9	[illegible]	Helper	[illegible]
10	[illegible]	Helper	[illegible]

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Annexure-18: Community Engagement



8/1, Gopalganj- Shibchar TL Route



AP 15, Domar-Hatibandha TL



3/1 Satkira- Manirampur TL



11/5, Kaliganj Maheshpur TL Route



Package 5- Kaliganj Substation



Package 6- Purbachal Substation

Focus Group Discussion (FGD)

Gender: Male
Location: Madaripur.
Time: 1:15 P.M.
Date: 9/8/2025

List of Participants

S/L	Name of Participants	Age	Occupation	Signature
1	Shawkat Mollaberi.	35	Business	
2	Rukul Amin Fakir.	38	"	
3	Md. Sakat.	32	"	
4	Kajal Khan.	39	"	Kajal Khan
5	Khokon Shikder.	41	"	
6	Md. Kalai Howlader.	42	"	

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Focus Group Discussion (FGD)

Gender: Male
Location: Domar.
Time: 12:00 P.M.
Date: 9/11/2025

List of Participants

S/L	Name of Participants	Age	Occupation	Signature
1	Md. Romej Khan.	30	Farmer.	
2	Shajahan.	28	"	
3	MD. Manu.	65	"	
4	MD. Abul kalam.	58	"	
5	MD. Moti Mia.	38	"	

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Focus Group Discussion (FGD)

Gender: Male
Location: Satkhira, Khulna.
Time: 12:00 PM
Date: 8/12/2025.

List of Participants

S/L	Name of Participants	Age	Occupation	Signature
1	Narayn Chandra Das.	35	Business.	
2	Bigush Kumen Das.	38	Business.	
3	MD. Nazrul Islam.	41	Teastall.	
4	MD. Abu Bakkar.	45	Farmer.	
5	MD. Mohosin Sardar.	54	Farmer.	
6	MD. Nasser Ali	29	Business.	
7	B.M. Babluer Rahman.	36	Business.	
8	Mamun Hossen.	38	Teastall.	

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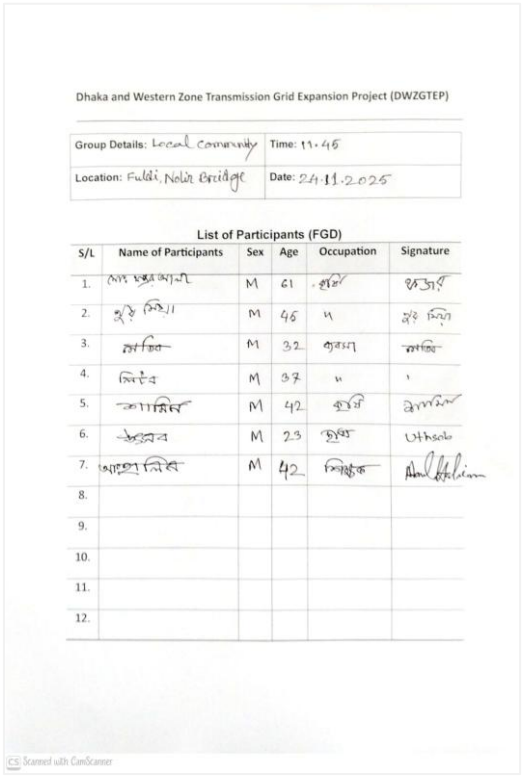
Focus Group Discussion (FGD)

Gender: Male
Location: Jhenidah.
Time:
Date: 13/07/2025

List of Participants

S/L	Name of Participants	Age	Occupation	Signature
1	Md. Abdul Wahab.	45	Farmer.	
2	Md. Tipu Sultan.	29	Business	
3	Md. Monwar Hossen.	67.	Farmer.	

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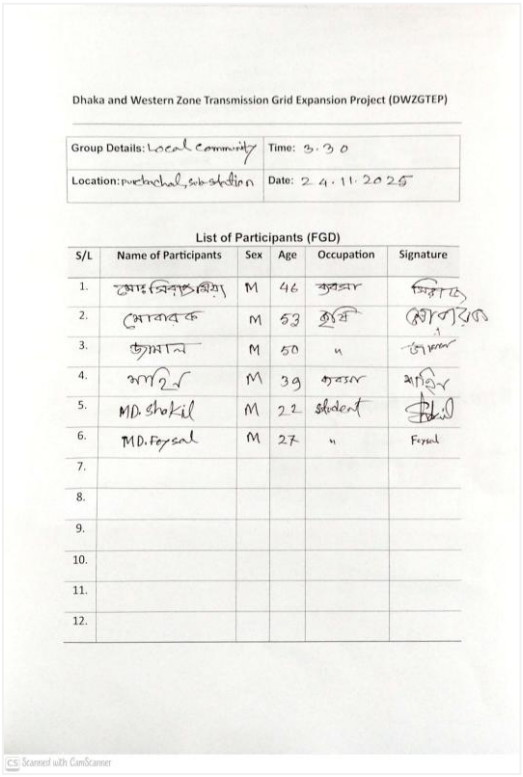
Dhaka and Western Zone Transmission Grid Expansion Project (DWZGTEP)

Group Details: Local community	Time: 11.45
Location: Fuldi, Nolir Bridge	Date: 24.11.2025

List of Participants (FGD)

S/L	Name of Participants	Sex	Age	Occupation	Signature
1.	[illegible]	M	61	[illegible]	[illegible]
2.	[illegible]	M	46	"	[illegible]
3.	[illegible]	M	32	[illegible]	[illegible]
4.	[illegible]	M	37	"	"
5.	[illegible]	M	42	[illegible]	[illegible]
6.	[illegible]	M	23	[illegible]	Uthsob
7.	[illegible]	M	42	[illegible]	[illegible]
8.					
9.					
10.					
11.					
12.					

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Dhaka and Western Zone Transmission Grid Expansion Project (DWZGTEP)

Group Details: Local community	Time: 3.30
Location: [illegible], sub station	Date: 24.11.2025

List of Participants (FGD)

S/L	Name of Participants	Sex	Age	Occupation	Signature
1.	[illegible]	M	46	[illegible]	[illegible]
2.	[illegible]	M	53	[illegible]	[illegible]
3.	[illegible]	M	50	"	[illegible]
4.	[illegible]	M	39	[illegible]	[illegible]
5.	MD. Shakil	M	22	Student	[illegible]
6.	MD. Foysal	M	27	"	Foysal
7.					
8.					
9.					
10.					
11.					
12.					

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Training Details

https://drive.google.com/file/d/1nY0OJZDjPKQqghlkA_Nsw1y7frwcqDOE/view?usp=sharing

Annexure-19: Photos of Switchyards of Existing Substations

https://drive.google.com/drive/folders/1gd64lIY603Y3jj0QRSsXLAtNYtoxyNyP?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

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)

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 here-to as Appendix [2,3]; and (ii) any corrective or preventative actions set out in safeguards moni-toring 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:

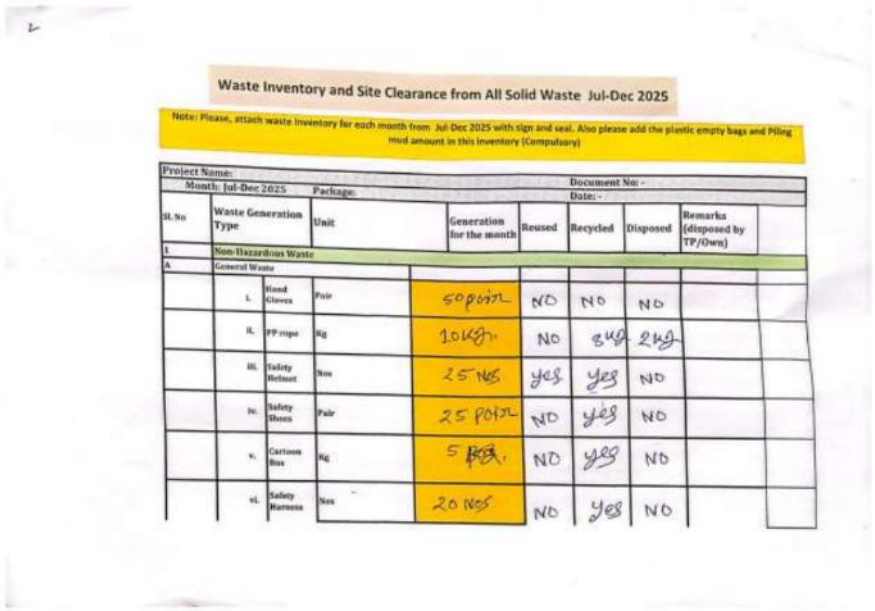
1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)



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

Package 1

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co



Waste Inventory and Site Clearance from All Solid Waste Jul-Dec 2025

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

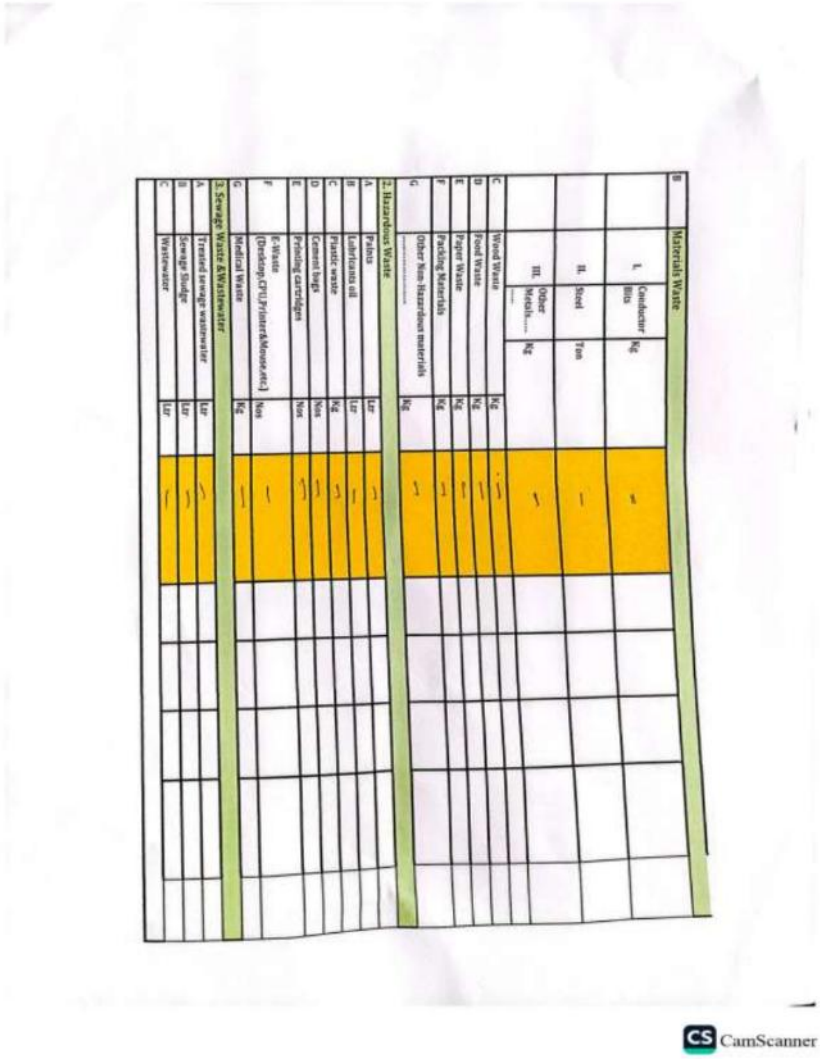
Project Name:
Month: Jul-Dec 2025 Package: Document No: -
Date: -

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	50 pairs	ND	ND	ND		
	ii.	PP rope	Kg	10 kg.	No	8kg	2kg		
	iii.	Safety Helmet	Nos	25 NOS	yes	yes	ND		
	iv.	Safety Shoes	Pair	25 pairs	ND	yes	ND		
	v.	Cartoon Box	Kg	5 kg.	ND	yes	ND		
	vi.	Safety Harness	Nos	20 NOS	ND	yes	ND		

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Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co



CamScanner

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Package 3

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

Project Name:	132 KV & 230 KV ADB-3 Project.					Document No: - : Jul-Dec 2025 -01		
Month: Jul-Dec 2025		Package: 03				Date: - 01.01.2026		
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	810	141	141	669	Own
	ii.	PP rope	Kg	300	300	250	50	Own
	iii.	Safety Helmet	Nos	561	561	521	40	Own
	iv.	Safety Shoes	Pair	561	0	0	561	Own
	v.	Cartoon Box	Kg	80	0	0	80	TP
	vi.	Safety Harness	Nos	130	130	0	0	
B	Materials Waste							
	I.	Conductor Bits	Kg	1400	1200	0	200	TP
	II.	Steel	Ton	410	410	380	30	TP
	III.	Other Metals.....	Kg	80	0	0	80	Own
C	Wood Waste		Kg	430	210	220	220	Own
D	Food Waste		Kg	341	0	0	341	TP
E	Paper Waste		Kg	42	20	20	22	Own
F	Packing Materials		Kg	88	66	22	22	Own

Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

MONTHLY WASTE GENARATION REPORT

Project Name:	132 KV & 230 KV ADB-3 Project.					Document No: - : Jul-Dec 2025 -01	
Month: Jul-Dec 2025	Package: 03				Date: - 01.01.2026		
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
G	Other Non-Hazardous materials	Kg	0	0	0	0	0
2. Hazardous Waste							
A	Paints	Ltr	55	0	0	55	Own
B	Lubricants oil	Ltr	130	120	120	10	Own
C	Plastic waste	Kg	0	0	0	0	
D	Cement bags	Nos	3881	0	0	3881	TP
E	Printing cartridges	Nos	2	0	0	2	Own
F	E-Waste (Desktop,CPU,Printer&Mouse,etc.)	Nos	1	1	0	0	
G	Medical Waste	Kg	0	0	0	0	
3. Sewage Waste &Wastewater							
A	Treated sewage wastewater	Ltr	500	0	0	500	Own
B	Sewage Sludge	Ltr	60	0	0	60	
C	Wastewater	Ltr	90	0	0	90	

Sensitivity: LNT Construction Internal Use

Package 4

Waste Inventory and Site Clearance from All Solid Waste Jul-Dec 2025

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

Project Name: PACKEG-4								Document No: -	
Month: Jul-Dec 2025	Package: 4							Date: -30.12.2025	
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								
		Hand Gloves	Pair	300			Disposed	Own	
		PP rope	Kg	100	Reused				
		Safety Helmet	Nos	135		Recycled			
		Safety Shoes	Pair	162	62 nos reused		100 nos Disposed	Own	
		Cartoon Box	Kg	80	Reused				
		Safety Harness	Nos	5			Disposed	Own	
B	Materials Waste								
		Conductor Bits	Kg	300	Reused				
		Steel	Ton	4	Reused				
		Other Metals.....	Kg	0					
C	Wood Waste		Kg	0					
D	Food Waste		Kg	10			Disposed	Own	
E	Paper Waste		Kg	20	Reused				
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	4500	Reused				
E	Printing cartridges		Nos	15	Reused				
F	Pilling mud		CFT	1800	Reused				
G	Medical Waste		Kg	0.5			Disposed	Own	
3. Sewage Waste &Wastewater									
A	Treated sewage wastewater		Ltr						
B	Sewage Sludge		Ltr						
C	Wastewater		Ltr						

TRANSRAIL LIGHTING LIMITED BANGLADESH BRANCH

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Package 5

国家电网
STATE GRID
中国电力技术装备有限公司
CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD.

Waste Inventory and Site Clearance from All Solid Waste Jul-Dec 2025

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

Project Name: New 400/230 kV GIS Substation at Kaligaj (Package-5)							Document No: -	
Month: Jul-Dec 2025		Package: 5					Date: - 31.12.2025	
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	4			4	TP	
ii.	PP rope	Kg	6			6	TP	
iii.	Safety Helmet	Nos	7			7	TP	
iv.	Safety Shoes	Pair	4			4	TP	
v.	Cartoon Box	Kg	0			0		
vi.	Safety Harness	Nos	2			2	TP	
B	**Materials Waste**							
i.	Conductor Bits	Kg	0			0		
ii.	Steel	Ton	0			0		
iii.	Other Metals.....	Kg	0			0		
C	Wood Waste	Kg	100			100	TP	
D	Food Waste	Kg	550			550	TP	
E	Paper Waste	Kg	0			0	TP	
F	Packing Materials	Kg	0			0		
G	Other Non-Hazardous materials	Kg	0			0		
2.	**Hazardous Waste**							
A	Paints	Ltr	0					
B	Lubricants oil	Ltr	0					
C	Plastic waste	Kg	0					
D	Cement bags	Nos	3800			3800	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					
C	Wastewater	Ltr	0					

CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD
Da Cheng Building, No. 8, Nanheng East Street, Xicheng District, Beijing 100052, China
Tel: 86-10-63412099 Fax: 86-10-63412040
www.cet.sgcc.com.cn

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 6

国家电网
STATE GRID
中国电力技术装备有限公司
CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD.

Waste Inventory and Site Clearance from All Solid Waste Jul-Dec 2025

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

Project Name: New 400/230/132 kV GIS Substation at Purbachal (Package-6) **Document No: -**

Month: Jul-Dec 2025 **Package: 6** **Date: - 31.12.2025**

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	5			5	TP	
	ii PP rope	Kg	4			4	TP	
	iii Safety Helmet	Nos	8			8	TP	
	iv Safety Shoes	Pair	6			6	TP	
	v Cartoon Box	Kg	0			0		
	vi Safety Harness	Nos	3			3	TP	
B	Materials Waste							
	i Conductor Bits	Kg	0			0		
	ii Steel	Ton	0			0		
	iii Other Metals.....	Kg	0			0		
C	Wood Waste	Kg	150			150	TP	
D	Food Waste	Kg	750			750	TP	
E	Paper Waste	Kg	0			0	TP	
F	Packing Materials	Kg	0			0		
G	Other Non-Hazardous materials	Kg	0			0		
2. Hazardous Waste								
A	Paints	Ltr	0					
B	Lubricants oil	Ltr	0					
C	Plastic waste	Kg	0					
D	Cement bags	Nos	4500			4500	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		

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www.cet.sgcc.com.cn

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 7

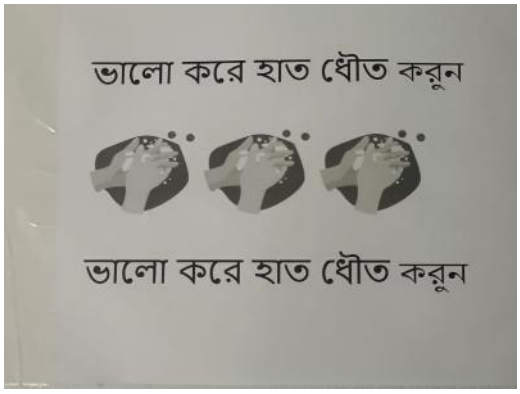
Waste Inventory and Site Clearance from All Solid Waste July-Dec 2025

Project Name: Rupsha **Document No: -**

Month: December 2025 **Package:** **Date: -**

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	100				Third Party	
	ii.	PP rope	Kg	20				Third Party	
	iii.	Safety Helmet	Nos	80				Third Party	
	iv.	Safety Shoes	Pair	30				Third Party	
	v.	Cartoon Box	Kg	20				Third Party	
	vi.	Safety Harness	Nos	20				Third Party	
B	**Materials Waste**								
	I.	Conductor Bits	Kg					Third Party	
	II.	Steel	Ton					Third Party	
	III.	Other Metals.....	Kg					Third Party	
C	Wood Waste		Kg	1				Third Party	
D	Food Waste		Kg	1				Third Party	
E	Paper Waste		Kg	1				Third Party	
F	Packing Materials		Kg	1				Third Party	
G	Other Non-Hazardous materials		Kg	N/A				Third Party	
2. Hazardous Waste									
A	Paints		Ltr	N/A				Third Party	
B	Lubricants oil		Ltr	N/A				Third Party	
C	Plastic waste		Kg	15				Third Party	
D	Cement bags		Nos	230				Third Party	
E	Printing cartridges		Nos	12				Third Party	
F	E-Waste (Desktop,CPU,Printer&Mouse,etc.)		Nos	N/A				Third Party	
G	Medical Waste		Kg	0.2				Third Party	
3. Sewage Waste &Wastewater									
A	Treated sewage wastewater		Ltr	3				Third Party	
B	Sewage Sludge		Ltr	3				Third Party	
C	Wastewater		Ltr	3				Third Party	

Annexure-22: Safety Signs at Site

	
Package 3 (AP 5 SMTL and Store in Dumuria)	
	
Nilphamari store and 5/1 Domar Hatibandha TL	
	
AP 15, Domar-Hatibandha TL	15/1 Domar-Hatibandha TL
Package 4	









Package 5









Package 6

	
Phultala SS	Manirampur SS
Package 7	

Annexure-23: Status of CAP

Grievence Box at Sites



Package 6



11/2 Satkhira Rupsha TL (Package 3)

Secondary Container at construction site





AP 15 and 15/1 Domar-Hatibandha TLPackage 4

Worker with PPE



SS under Package 5



SS under Package 5

	
Phultola SS under Package 7	4/1 SMTL Package 3
	
8/2 TL Purbo Sadipur- Domar under Package 4	Rupsha SS under Package 7

Annexure-24: Pre-Work Briefing

	
20/2 Kaliganj- Maheshpur (Pakage 3)	Domar Hatibandha (Store) (Package 4)
	

Package 5	Package 6
	
Manirampur SS	Phultala SS
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 Pilling Work at Package 1

Hanbaek Co., Ltd **P.O. Box 62241**
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

Piling Work Safety Checklist

Project Information

- **Project Title:** Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1)
- **Contract No.:** PGCB/ADB/3853-BAN/DWZTGAP/400kV & 230kV LILO/P1
- **Contract Date:** 25.09.2023
- **Employer / Client:** Power Grid Company of Bangladesh (PGCB)
- **Funding Agency:** Asian Development Bank (ADB)
- **Contractor:** _____Handbaek Co Ltd_____
- **Site Location:** Kaliganj / Purbachal

Purpose of Piling Work Checklist

This checklist is used to ensure safe planning, execution, and monitoring of piling works to prevent accidents related to heavy equipment, lifting operations, ground instability, noise, vibration, and other occupational hazards, in compliance with OHS requirements, ADB Safeguard Policy Statement (SPS), and national regulations.

General Information

- **Pile Location / Chainage:** _____
- **Type of Pile:** Bored / Driven / Cast-in-situ / Micro pile / Other
- **Pile Diameter / Size:** _____
- **Piling Rig No.:** _____
- **Date:** _____ **Permit No.:** _____
- **Supervisor / Engineer:** _____

Piling Work Safety Checklist

Sl. No.	Safety Item	Yes	No	N/A	Remarks / Corrective Action
1	Piling method statement approved	✓	☐	☐	
2	Permit-to-work issued and valid	✓	☐	☐	
3	Piling rig fitness certificate available	✓	☐	☐	
4	Rig operator certified and competent	✓	☐	☐	

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Hanbaek Co., Ltd **P.O. Box 62241**
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
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5	Ground stability checked and levelled	✓	☐	☐	
6	Safe working area barricaded	✓	☐	☐	
7	Lifting gears inspected and color-coded	✓	☐	☐	
8	Lifting plan approved (if applicable)	✓	☐	☐	
9	Safe distance maintained from overhead lines	✓	☐	☐	
10	Adequate lighting provided (if night work)	✓	☐	☐	
11	Noise and vibration control measures in place	✓	☐	☐	
12	PPE used (helmet, gloves, safety shoes, ear plug)	✓	☐	☐	
13	Emergency stop and alarm functional	✓	☐	☐	
14	First aid and emergency response available	✓	☐	☐	

Declaration

I confirm that the above safety checks have been carried out and all necessary control measures are in place before and during piling works.

Authorization

Approved By

Name: ___Subir Singha_____

Signature: _

Note: This checklist shall be completed prior to commencement of piling works and reviewed daily. Records shall be maintained at site and made available for inspection by PGCB, ADB, and relevant authorities.

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
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Safety Checklist for Excavation Work at Package 1

Hanbaek Co., Ltd **P.O. Box 62241**
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PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

Excavation Safety Checklist

Project Information

- **Project Title:** Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1)
- **Contract No.:** PGCB/ADB/3853-BAN/DWZTGAP/400kV & 230kV LILO/P1
- **Contract Date:** 25.09.2023
- **Employer / Client:** Power Grid Company of Bangladesh (PGCB)
- **Funding Agency:** Asian Development Bank (ADB)
- **Contractor:** _____Handbaek Co. Ltd_____
- **Site Location:** Kaliganj / Purbachal

Purpose of Excavation Safety Checklist

This checklist is used to ensure safe planning, execution, and monitoring of excavation activities to prevent collapse, falls, utility damage, and other hazards, in compliance with OHS requirements, ADB Safeguard Policy Statement (SPS), and national regulations.

General Information

- **Excavation Location:** _____
- **Type of Excavation:** Trench / Pit / Foundation / Cable Duct / Other
- **Depth (m):** _____ **Length (m):** _____ **Width (m):** _____
- **Date:** _____ **Permit No.:** _____
- **Supervisor / Engineer:** _____

Excavation Safety Checklist

Sl. No.	Safety Item	Yes	No	N/A	Remarks / Corrective Action
1	Excavation permit approved and available	✓	☐	☐	
2	Underground utilities identified and marked	✓	☐	☐	
3	Soil type assessed (stable / unstable)	✓	☐	☐	
4	Adequate shoring,	✓	☐	☐	

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23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

	benching, or sloping provided				
5	Safe access and egress (ladder / ramp) provided	✓	☐	☐	
6	Barricading and warning signage installed	✓	☐	☐	
7	Excavated material kept at safe distance from edge	✓	☐	☐	
8	Water accumulation controlled / dewatering arranged	✓	☐	☐	
9	Heavy equipment kept away from excavation edge	✓	☐	☐	
10	Daily inspection carried out by competent person	✓	☐	☐	
11	PPE used (helmet, safety shoes, gloves, vest)	✓	☐	☐	
12	Gas testing conducted (if confined space risk)	✓	☐	☐	
13	Adequate lighting provided (if night work)	✓	☐	☐	
14	Emergency rescue plan available and briefed	✓	☐	☐	

Declaration

I confirm that the above safety checks have been carried out and necessary control measures are in place before and during excavation work.

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

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PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

Authorization

Approved By

Name: _____Subir Singha ____

Signature: _

General Manager

Note: This checklist shall be completed before commencement of excavation and reviewed daily. Records shall be maintained at site and made available for inspection by PGCB and ADB.

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Safety Checklist for Erection Work at Package 3

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POWER TRANSMISSION & DISTRIBUTION

Issue:2-Rev:01
IM 9.1.1.3-A12

FULL BODY HARNESS INSPECTION CHECKLIST

Name of the Name of the: ADB-3 | Job Code: | BU/ Segment/ Cluster: | Date: 01.12.25
Name of Activity: Tower Erection | Name of Location: AP01

Sl. No.	Safety Harness Serial Number (by manufacturer)	Type of Safety Harness	Mfg. year	Visual Inspection Check Point			Monthly Inspection		Final Condition (O.K/ Rejected)	(If not OK) Remarks
				Harness: Waist buckle, Both leg strap buckle, Metal D Ring	Lanyard: snap hooks, carabineers, adjusters, keepers, thimbles, D-ring	Inspection against: cuts, burns, tears, abrasion, corrosion, stitches, excessive soiling, discoloration, Knots	Inspected date	Next Inspection Due Date		
1	15276	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
2	15166	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
3	15323	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
4	15234	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
5	15277	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
6	15301	F.B.H	2022	GOOD	OK	OK	01.12.25	31.12.25	OK	
7										
8										
9										
10										
11										
12										
13										
14										
15										

Note:- All Safety Belts must be inspected for all visual inspection check point as mentioned above. (If found satisfactory, write O.K.; otherwise reject & return to store for disposal)

Site Supervisor/ EHS Steward Name: Partho Da | EHSO/EHSM Name:
Site Supervisor/ EHS Steward Sign: | EHSO/EHSM Name:

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION

Issue 2 - Rev 01

IM 9.1.1.3-412

FULL BODY HARNESS INSPECTION CHECKLIST

Name of the Name of the: ADB-3 | Job Code: Name of Activity: Tower Erection | WO/ Segment/ Cluster: | Date: 02.11.25 | Name of Location: 40/2

Sl. No.	Safety Harness Serial Number (by manufacturer)	Type of Safety Harness	Mfg. year	Visual Inspection Check Point: Harness: Waist buckle, Both leg strap buckle, Metal D Ring	Visual Inspection Check Point: Lanyard: snap hooks, carabineers, adjusters, keepers, thimbles, D-ring	Visual Inspection Check Point: Inspection against: cuts, burns, tears, abrasion, corrosion, stitches, excessive soiling, discoloration, Knots	Monthly Inspection: Inspected date	Monthly Inspection: Next Inspection Due Date	Final Condition (O.K/ Rejected)	(If not OK) Remarks
1	15276	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
2	15166	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
3	15323	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
4	15234	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
5	15277	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
6	15301	F·B·H	2022	Good	OK	OK	01.11.25	30.11.25	OK	
7										
8										
9										
10										
11										
12										
13										
14										
15										

Note:- All Safety Belts must be inspected for all visual inspection check point as mentioned above. (If found satisfactory, write O.K.; otherwise reject & return to store for disposal)

Site Supervisor/ EHS Steward Name: partho Da		EHS/TOMM Name:
Site Supervisor/ EHS Steward Sign: 02.11.25		EHS/TOMM Name:

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION

Name of Site ADB-3 EHS CHECKLIST FOR ERECTION Location No- 40/2 Date 02.12.25

SL NO	DESCRIPTION	OBSERVATION		REMARKS
		YES	NO	
1	Whether tower earthing is completed (টাওয়ার আর্থিং সম্পন্ন হয়েছে কিনা।)	✓		
2	Is first aid box available on site? (স্থানে প্রাথমিক চিকিৎসা বাক্সের প্রাপ্যতা।)	✓		
3	Whether proper back filling is done and safe clearance is maintained from permanent structures, HT/LT lines.(সঠিক ব্যাক ফিলিং সম্পন্ন হয়েছে কিনা এবং স্থায়ী কাঠামো, HT/LT লাইন থেকে নিরাপদ ক্লিয়ারেন্স বজায় রাখা হয়েছে কিনা।)	✓		
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.(কর্মক্ষেত্রে অননুমোদিত ব্যক্তির প্রবেশ এড়াতে টাওয়ারের চারপাশে সতর্কতামূলক অঞ্চল তৈরি বা লাল পতাকা এবং বাঁশি সহ একজন প্রহরী মোতায়েন করা হয়েছে। উচ্চতা পর্যবেক্ষণকারী নিয়োগ করা।)	✓		
5	Whether proper communication system is established and communicated to the workers. (সঠিক যোগাযোগ ব্যবস্থা প্রতিষ্ঠিত হয়েছে কি না এবং শ্রমিকদের বুঝিয়ে দেওয়া হয়েছে।)	✓		
6	Whether life lines are provided in all four leg of tower and tied with stub of towers. (চারটি টাওয়ারের পায়ে লাইফ লাইন দেওয়া আছে কিনা।)	✓		
7	Whether the fitter has a height pass for working at height. (উচ্চতায় কাজ করার জন্য ফিটারের হাইট পাস আছে কিনা।)	✓		
8	Whether the fitters have a rope grab type fall arrester and use a vertical life line attached to the feet when climbing and descending from tower.(কিনা ফিটারের দড়ি গ্র্যাব টাইপ ফল অ্যারেস্টার থাকে এবং টাওয়ারের উপর দিয়ে আরোহণ এবং নামার সময় পায়ের সাথে দেওয়া উল্লম্ব লাইফ লাইন ব্যবহার করে।)	✓		
9	Horizontal lifelines are provided with horizontal bracing.(অনুভূমিক লাইফলাইন অনুভূমিক ব্রেসিং প্রদান করা হয়।)	✓		
10	Whether all main leg joints are properly tightened. (সমস্ত প্রধান পায়ের জয়েন্টগুলি সঠিকভাবে শক্ত করা হয়েছে কিনা।)	✓		
11	Whether all necessary plan bracing, hip bracing, diagonals etc. are lifted and fitted section wise before move to next section erection. (সমস্ত প্রয়োজনীয় প্ল্যান ব্রেসিং, হিপ ব্রেসিং, তির্যক ইত্যাদি সেকশন অনুযায়ী উত্তোলন	✓		
12	Whether all tommy bars and spanners have taglines. And, nut/bolts and washers are carried in the tool bag. (সব টমি বার এবং স্প্যানার ট্যাগলাইন আছে কিনা. নাট বল্টু এবং ওয়াশার টুল ব্যাগে নেওয়া হয়।)	✓		
13	Whether any TMT tommy bars are available at the location. (অবস্থানে কোনো TMT টমি বার পাওয়া যায় কিনা।)	✓		
14	Whether suitable tools and machines, ropes are being used and checked before starting work. (উপযুক্ত সরঞ্জাম এবং মেশিন, দড়ি ব্যবহার করা হচ্ছে কিনা এবং কাজ শুরু করার আগে পরীক্ষা করা হচ্ছে।)	✓		
15	Whether PP rope is used for lifting material. (পিপি দড়ি উপাদান উত্তোলন জন্য ব্যবহার করা হয় কিনা.)		✓	
16	Come Along Clamp/Mechanical clamps/any alternative arrangements are used to hold the load until the tower section is installed at height. (টাওয়ারের অংশটি উচ্চতায় না লাগানো পর্যন্ত লোড ধরে রাখার জন্য সিএসি/মেকানিকাল ক্ল্যাম্প ব্যবহার করা হয়।)	✓		
17	Sling/wire rope protected against sharp edges. (স্লিং/তারের দড়ি ধারালো প্রান্তের বিরুদ্ধে সুরক্ষিত।)	✓		
18	All anchorage points are secured and properly reinforced. (৩টি কাকের দণ্ড সহ সমস্ত অ্যাঙ্করেজ পয়েন্ট এবং সঠিকভাবে শক্তিশালী করা হয়েছে কিনা।)	✓		
19	Are 4 nos guy sling support provided for gin pole (ডেইদার জিনের খুঁটিতে 4টি গাই দড়ি রয়েছে।)	✓		
20	Weather HT nut & bolt are in use for gin pole joints (জিন পোল জয়েন্টে HT বোল্ট-নাট ব্যবহার করা হয় কিনা।)	✓		
21	Are only single sheave pulley of Close type is used in height or not. (উচ্চতায় কি না বন্ধ ধরনের একক শেভ পুলি ব্যবহার করা হয়।)	✓		
22	Whether all T&Ps have third party TC and have identification number or color coding. (সমস্ত T&P-এর তৃতীয় পক্ষের TC আছে কিনা এবং সনাক্তকরণ নম্বর এবং রঙ কোডিং আছে কিনা।)	✓		
23	Whether drinking water is available at workplace. (কর্মক্ষেত্রে পানীয় জলের ব্যবস্থা আছে কিনা।)	✓		

Laborer/Site Engineer/Site Supervisor

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION

EHS CHECKLIST FOR ERECTION

Name of Site ADB-3, Location No- ADO1, Date 01.12.25

SL NO	DESCRIPTION	OBSERVATION YES	OBSERVATION NO	REMARKS
1	Whether tower earthing is completed (টাওয়ার আর্থিং সম্পন্ন হয়েছে কিনা।)	✓		
2	Is first aid box available on site? (স্থানে প্রাথমিক চিকিৎসা বাক্সের প্রাপ্যতা।)	✓		
3	Whether proper back filling is done and safe clearance is maintained from permanent structures, HT/LT lines.(সঠিক ব্যাক ফিলিং সম্পন্ন হয়েছে কিনা এবং স্থায়ী কাঠামো, HT/LT লাইন থেকে নিরাপদ ক্লিয়ারেন্স বজায় রাখা হয়েছে কিনা।)	✓		
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.(কর্মক্ষেত্রে অননুমোদিত ব্যক্তির প্রবেশ এড়াতে টাওয়ারের চারপাশে সতর্কতামূলক অঞ্চল তৈরি বা লাল পতাকা এবং বাঁশি সহ একজন প্রহরী মোতায়েন করা হয়েছে। উচ্চতা পর্যবেক্ষণকারী নিয়োগ করা।)	✓		
5	Whether proper communication system is established and communicated to the workers. (সঠিক যোগাযোগ ব্যবস্থা প্রতিষ্ঠিত হয়েছে কি না এবং শ্রমিকদের বুঝিয়ে দেওয়া হয়েছে।)	✓		
6	Whether life lines are provided in all four leg of tower and tied with stub of towers. (চারটি টাওয়ারের পায়ে লাইফ লাইন দেওয়া আছে কিনা।)	✓		
7	Whether the fitter has a height pass for working at height. (উচ্চতায় কাজ করার জন্য ফিটারের হাইট পাস আছে কিনা।)			
8	Whether the fitters have a rope grab type fall arrester and use a vertical life line attached to the feet when climbing and descending from tower.(কিনা ফিটারের দড়ি গ্র্যাব টাইপ ফল অ্যারেস্টার থাকে এবং টাওয়ারের উপর দিয়ে আরোহণ এবং নামার সময় পায়ের সাথে দেওয়া উল্লম্ব লাইফ লাইন ব্যবহার করে।)	✓		
9	Horizontal lifelines are provided with horizontal bracing.(অনুভূমিক লাইফলাইন অনুভূমিক ব্রেসিং প্রদান করা হয়।)	✓		
10	Whether all main leg joints are properly tightened. (সমস্ত প্রধান পায়ের জয়েন্টগুলি সঠিকভাবে শক্ত করা হয়েছে কিনা।)	✓		
11	Whether all necessary plan bracing, hip bracing, diagonals etc. are lifted and fitted section wise before move to next section erection. (সমস্ত প্রয়োজনীয় প্ল্যান ব্রেসিং, হিপ ব্রেসিং, তির্যক ইত্যাদি সেকশন অনুযায়ী উত্তোলন	✓		
12	Whether all tommy bars and spanners have taglines. And, nut/bolts and washers are carried in the tool bag. (সব টমি বার এবং স্প্যানার ট্যাগলাইন আছে কিনা. নাট বল্টু এবং ওয়াশার টুল ব্যাগে নেওয়া হয়।)	✓		
13	Whether any TMT tommy bars are available at the location. (অবস্থানে কোনো TMT টমি বার পাওয়া যায় কিনা।)	✓		
14	Whether suitable tools and machines, ropes are being used and checked before starting work. (উপযুক্ত সরঞ্জাম এবং মেশিন, দড়ি ব্যবহার করা হচ্ছে কিনা এবং কাজ শুরু করার আগে পরীক্ষা করা হচ্ছে।)	✓	✗	
15	Whether PP rope is used for lifting material. (পিপি দড়ি উপাদান উত্তোলন জন্য ব্যবহার করা হয় কিনা.)		✓	
16	Come Along Clamp/Mechanical clamps/any alternative arrangements are used to hold the load until the tower section is installed at height. (টাওয়ারের অংশটি উচ্চতায় না লাগানো পর্যন্ত লোড ধরে রাখার জন্য সিএসি/মেকানিকাল ক্ল্যাম্প ব্যবহার করা হয়।)	✓		
17	Sling/wire rope protected against sharp edges. (স্লিং/তারের দড়ি ধারালো প্রান্তের বিরুদ্ধে সুরক্ষিত।)	✓		
18	All anchorage points are secured and properly reinforced. (৩টি কাকের দণ্ড সহ সমস্ত অ্যাঙ্করেজ পয়েন্ট এবং সঠিকভাবে শক্তিশালী করা হয়েছে কিনা।)	✓		
19	Are 4 nos guy sling support provided for gin pole (উইন্দার জিনের খুঁটিতে 4টি গাই দড়ি রয়েছে।)	✓		
20	Weather HT nut & bolt are in use for gin pole joints (জিন পোল জয়েন্টে HT বোল্ট-নাট ব্যবহার করা হয় কিনা।)	✓		
21	Are only single sheave pulley of Close type is used in height or not. (উচ্চতায় কি না বন্ধ ধরনের একক শেভ পুলি ব্যবহার করা হয়।)	✓		
22	Whether all T&Ps have third party TC and have identification number or color coding. (সমস্ত T&P-এর তৃতীয় পক্ষের TC আছে কিনা এবং সনাক্তকরণ নম্বর এবং রঙ কোডিং আছে কিনা।)	✓		
23	Whether drinking water is available at workplace. (কর্মক্ষেত্রে পানীয় জলের ব্যবস্থা আছে কিনা।)	✓		

Signature of Section Incharge/Site- Engineer/Site Supervisor:

Signature of EHSO/EHS Supervisor: 01.12.25

Sensitivity: L&T Construction Internal Use

Safety Checklist for Stringing Work at Package 3

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 01

Ref: IM- 9.1.1.3-A2

WORKING AT HEIGHT CHECKLIST

Name of the Project/Factory: ADB-3 Job Code :
Inspected By : pantho Das Date : 04.10.25
Sub-Contractors Name : Sayem Engineering Location : 35/2

Sl.No	Activities	Observation	Measures
1	All the workers have been explained safe work-procedures?	Yes	
2	An established communication system has been established and explained to the workers.	Yes	
3	Adequate illumination has been ensured	Yes	
4	Work-area inspected prior to stating of the job.	Yes	
5	Area below the workplace barricaded, especially below hot-works.	Yes	
6	Workmen provided with bag / box to carry bolt, nuts and hand tools.	Yes	
7	Arrangement for fastening hand tools made.	Yes	
8	All workplatforms ensured to be of adequate strength and ergonomically suitable.	Yes	
9	Fabricated make shift arrangements are checked for quality and type of material welding, anchoring etc.	Yes	
10	Work at more than one elevation at the same segment is restricted.	Yes	
	ACCESS / EGRESS		
1	Walkways provided with hand-rail, mid-rail & toe guard?	Not applicable	
2.	All chequered plates, gratings properly welded / bolted?	Yes	
3	Are ladders inspected and whether they are maintained in good condition	Yes	
4	Are ladders spliced	No	
5	Are ladders properly secured to prevent slipping, sliding or falling	Yes	
6	Do side-rails extend 36" above top of landing	Yes	
7	Are built up ladders constructed of sound materials	Yes	
8	Rungs and cleats not over 12" on centre	Yes	
9	Metal ladders not used around electrical hazards	Yes	
10	Proper maintenance and storage	Yes	
11	Ladders placed at right slope	Yes	
12	Ladders, staircases welded/bolted properly	Yes	

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Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 01

Sl.No	Activities	Observation	Measures
13	Any obstruction in the stairs	Yes	
14	Are landings provided with handrails, knee-rails, toe-boards etc.	Yes	
15	Whether ramp is provided with proper slope	Yes	
16	Proper hand-rail/guards provided in ramps.	Yes	
	HOUSEKEEPING		
1	Walkways, aisles & all overhead workplaces cleared of loose material.	Yes	
2	Flammable material, if any, are cleared	Yes	
3	All shuttering materials are removed after de-shuttering is done.	Yes	
4	Platforms and walkways free of oil / grease or any other slippery spillage	Yes	
5	Collected scrap are brought down or lowered down and not dropped from height.		
	PPE & SAFETY DEVICES		
1	Use of safety helmets, Full body Safety Harness ensured for all workers.	Yes	
2	Anchoring point provided at all places of work.	Yes	
3	Common life–line provided wherever linear movement at height is required.	Yes	
4	Safety nets are in use wherever required.	Not applicable	
5	Proper fall arrest system is deployed at critical work places.	Yes	
6	Crawler boards / Safety system for work on fragile roof are used	Yes	

partho Das

Name & Signature of EHSO/FEHSM

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Sensitivity: LNT Construction Internal Use

Pile Foundation Checklist Package 3

L&T Construction
PTD, TL BU

Name of Project: ADB-3
Location number - TT (RKTL) Date of Inspection: 02.11.25

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 tripod legs are fastened properly? (ট্রাইপড পা কি ঠিকমত বাঁধা আছে?)	Yes	
1.2	Are all the bolts of flange joint fitted properly and tightened, with no blank hole? (ফ্ল্যাঞ্জ জয়েন্টের সমস্ত বোল্ট কি সঠিকভাবে লাগানো এবং শক্ত করা হয়েছে, কোন ফাঁকা গর্ত নেই?)	Yes	
1.3	Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাঙ্গার পিন/বোল্টের অবস্থা কি ঠিক আছে এবং কোনো ত্রুটি বা ক্ষতি থেকে মুক্ত?)	Yes	
1.4	Is the wire rope used for hoisting of DMC pipe, tremie pipe found free from all defects like bird cage, broken wires, kink etc?(DMC পাইপ, ট্রেমি পাইপ উত্তোলনের জন্য ব্যবহৃত তারের দড়ি কি bird cage, ভাঙা তার, কিঙ্ক ইত্যাদি সমস্ত ত্রুটি থেকে মুক্ত পাওয়া যায়?)	Yes	
1.5	Is the hook latch installed on hook used for hanging the load?(হুকের উপর লাগানো হুক ল্যাচ কি লোড ঝুলানোর জন্য ব্যবহৃত হয়?)	Yes	
1.6	Are minimum of 4 no U clamps installed for splicing of wire rope? (তারের দড়ি সংযুক্ত করার জন্য কি ন্যূনতম 4টি U clamp ইনস্টল করা নেই?)	Yes	
1.7	Are the gap between all U clamps are equal? (সমস্ত U ক্ল্যাম্পের মধ্যে ফাঁক কি সমান?)	Yes	
1.8	Are the bolt portion of U clmap is towards live end of wire rope?(U ক্ল্যাম্পের বোল্ট অংশ কি তারের দড়ির লাইভ প্রান্তের দিকে?)	Yes	
2. Winch Machine (During Pile operation)			
2.1	Are all rotatory parts guarded?(সব ঘূর্ণন অংশ রক্ষিত?)	Yes	
2.2	Are 3 no V belts in use? (3টি নো V বেল্ট কি ব্যবহার করা হচ্ছে?)	Yes	
2.3	Is exhaust pipe available? (নিষ্কাশন পাইপ উপলব্ধ?)	Yes	
2.4	Is condition of pinion & shaft found ok?(পিনিয়ন ও শ্যাফটের অবস্থা কি ঠিক আছে?)	Yes	
2.5	Is condition of brae shoe & drum shoe found ok? (ব্রে শু এবং ড্রাম জুতার অবস্থা কি ঠিক আছে?)	Yes	
3. Welding machine			
3.1	Is welding machine covered by metal sheet (মেটাল শীট দ্বারা আবৃত ওয়েল্ডিং মেশিন হয়)	Yes	
3.2	Is body earth available for welding machine (ঢালাই মেশিনের জন্য বডি আর্থিংউপলব্ধ)	Yes	
3.3	Is welding cable with earth clamp used for return path (রিটার্ন পাথের জন্য ব্যবহৃত আর্থ ক্ল্যাম্প সহ ঢালাই কেবল করছে কি না ?)	Yes	
3.4	Is the welding cable is free from any defect, joint & damage (ঢালাই তার কোন ত্রুটি, জয়েন্ট এবং ক্ষতি থেকে মুক্ত?)	Yes	
3.5	Is welder having leather apron, leather gloves & welder face shield? (ওয়েল্ডারের কি চামড়ার এপ্রোন, চামড়ার গ্লাভস এবং ওয়েল্ডার ফেস শিল্ড আছে?)	Yes	
4. Diesel generator			
4.1	Is body earth of DG installed? (ডিজির বডি আর্থ কি ইনস্টল করা হয়েছে?)	Yes	
4.2	Is the DG terminal box is closed? (ডিজি টার্মিনাল বক্স কি বন্ধ?)	Yes	
4.3	Is only double core & double insulated cable used for electric power distribution? (বৈদ্যুতিক শক্তি বিতরণের জন্য কি শুধুমাত্র ডাবল কোর এবং ডাবল ইনসুলেটেড তার ব্যবহার করা হয়?)	Yes	
4.4	Is the electrical cable connection is by lugs & nut & bolt? (বৈদ্যুতিক তারের সংযোগ কি লাগস এবং নাট এবং বোল্ট দ্বারা হয়?)	Yes	

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4.5	Is the RCCB/ELCB available for power supply? (বিদ্যুৎ সরবরাহের জন্য কি RCCB/ELCB উপলব্ধ?)	Ye)	
4.6	Are 3 no V belts used in DG (ডিজিতে কি ৩টি ভি বেল্ট ব্যবহার করা হয়?	Ye)	
4.7	Is the rotatory parts of DG guarded properly? (ডিজির ঘূর্ণায়মান অংশগুলি কি সঠিকভাবে আচ্ছাদিত ?)	Ye)	
5. Boring/Drilling			
5.1	Are the system of double chain wrench wrapping system adopted for removing of DMC pipe after completion of boring. (বোরিং শেষ হওয়ার পরে DMC পাইপ অপসারণের জন্য ডাবল চেইন রেঞ্চ মোড়ানো সিস্টেমের ব্যবস্থা গ্রহণ করা হয়েছে?)		
5.2	Is the condition of stopper channel found ok without much opening? (স্টপার চ্যানেলের অবস্থা অনেক খোলা আছে কি না ?		
6. Dewatering Pump			
6.1	Is rotatory parts guarded properly?(ঘূর্ণন অংশ সঠিকভাবে ঢাকা আছে কি না?)	Ye)	
7. Concrete Mixture Machine			
7.1	Are all rotatory parts of machine guarded? (মেশিনের সমস্ত ঘূর্ণন অংশ কি সুরক্ষিত?)	Ye)	
7.2	Are all workmen involved for aggregate & cement pouring with nose mask? (সমস্ত কর্মীরা যারা সিমেন্ট এবং বালি সরবরাহ করছে তারা কি নাকে মুখোশ দিয়ে কাজ করছে ?)	Ye)	
7.3	Is the person who will climb on hopper with full body harness? (যে ব্যক্তি ফানেল উপর আরোহণ করছে সে সেফটি বেল্ট ব্যবহার করছে কি না?)	Ye)	
Name & Signature of Supervisor or EHS Steward	partho DO		

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Checklist for Stringing of Package 3



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

STRINGING CHECKLIST

SECTION - 37/0 to 38/0 to 39/0.
SECTION LENGTH -

SL NO	Document Name	Verified
1	Height work permit	✓
2	PPE Checklist	✓
3	Stringing Checklist	✓
4	FBH Checklist	✓
5	Checklist	✓
6	Tools Checklist	✓
7		

EMERGANCY CONTACT DETAILS

SL NO	DETAILS	PHONE NUMBER
1	pantho Das	01723-352222
2	Anoop. AT	01715-251106
3		
4	Dumariya Hospital	+8801730324596
5	Ambulance	+8801711217563
6	Fire Station	+8801968883009
7	Emergency number	999

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L & T CONSTRUCTION

Power Transmission & Distribution

Stringing Checklist - Section- (37/0+039/0)

22	Wheather minimum 18 mm of wire rope/sling is used for the back stay	Yes	
23	Wheather the direction of back stay is 180 degree of existing conductor.	Yes	
24	Wheather back stay is provided at a distance of minimum 2h of tower	Yes	
Paying Out Of OPGW:			
25	Work is being carried out with full safety measures as per guide line.	Yes	
26	Travelling grounds are provided	Yes	
27	Paving out is carried out as per approved drum schedule.	Yes	
28	All pulleys fixed on towers for paying out are moving freely and close type.	Yes	
29	Effective communication exists through Walkie-Talkie and through persons on towers.	Yes	
30	OPGW is being constantly checked as it is un-Yes/No wound. Damaged portion, if any, is removed.	Yes	
31	Necessary arrangements have been provided to avoid rubbing of OPGW against hard ground.	Yes	
32	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter, pave in out of conductor, clip in etc.	Yes	
Paying Out Of Conductor Wire:			
33	Conductor drums are placed properly to avoid bird caging	Yes	
34	Sequence of paving out is such that to avoid unbalancing of load on tower.	Yes	
35	Paving out is carried out as per approved drum schedule.	Yes	
36	Effective communication exists through walkie-talkie and through persons standing on towers for smooth and safe paying out.	Yes	
37	Proper arrangements made to avoid rubbing of conductor on ground/ hard surfaces.	Yes	
38	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter, pave in out of conductor, clip in etc.	Yes	
Final Sagging & Tensioning of OPGW & Conductor:			
39	Sag board is fixed correctly after taking into account length of suspensn clamp/fittings.	Yes	

Sensitivity: LNT Construction Internal Use

L & T CONSTRUCTION

Power Transmission & Distribution

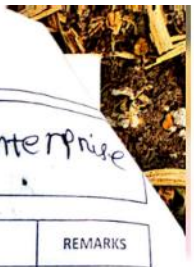
Stringing Checklist - Section- 37/0 TO 39/0

40	No. of sag boards fixed in a section is as per technical specification.	Yes	
41	After measuring sag, marking/cutting of OPGW/conductor is done correctly to fix tension clamp/fittings)	Yes	
42	Wheather winch machine is used for final sagging purpose.	Yes	
43	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter,etc.	Yes	
44	Whetaher automatic clamp/Kitto clamp is used during conductor marking.	Yes	
45	Wheather fitters were not presented on the cross arm during the final sag.	Yes	
46	Wheather fitters were not present on the cross arm after complete the final sag(quarter fixing) and also not allowed to fitter for removing automatic clamp immediately(within 30minute) after fixing the quarter.	Yes	
47	Whetaher rock chair is provided & used for removing the automatic clamp in case of applicable.	Yes	
48	Is the rough sag taken on the dead man or incase of column then proper protection to column is provided.	Yes	
49	Is proper sized articulated joints were fixed as per the requirement.	Yes	
50	Is minimum 2nos automatic clamp were fixed for the final sagging	Yes	

Location no- 37/0 TO 39/0

Signature of Site Supervisor-

Signature of Safety Steward- Pantho Das



L&T CONSTRUCTION, PT&D, TL BU

STRINGING CHECKLIST

Bangladesh TL Projects

Approved PTP Refer:- Stretch

Name of Project:- AD B-3 Name of sub-contractor Jibon Enterprise

Inspected by Partho Das Date: 20.4.25

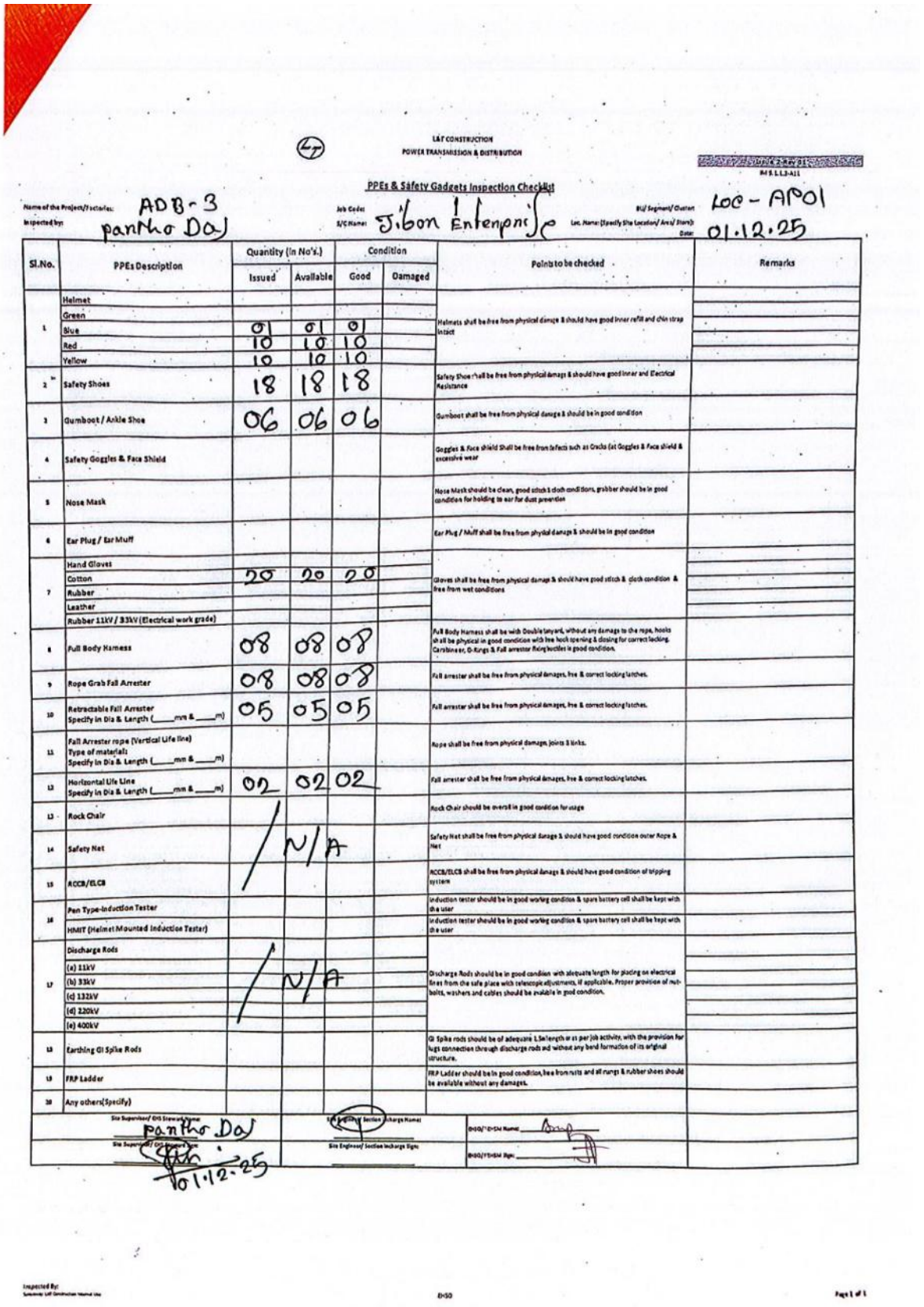
	SL NO	DESCRIPTION	STATUS	Compliance status	REMARKS
PRE-STRINGING CHECKLIST	1	Is PTP approved from HQ before start stringing activity	Yes/NO		
	2	Written approval obtained from client	Yes/NO		
	3	Towers are tightened properly and all the members, Nut/Bolts are provided.	Yes/NO		
	4	Trees in the corridor removed to facilitate smooth stringing.	Yes/NO		
	5	All Line materials, tested T & P, safety equipments and relevant drawings are available for stringing.	Yes/NO	-	
	6	Shutdown of Power line/ Railway block if required is arranged.	Yes/NO		
	7	Necessary Protection/ scaffolding/warning signals provided for Railway/Power line/ P&T line/Road Crossing.	Yes/NO		
	8	Towers vulnerable for one side load is guyed properly.	Yes/NO		
	9	Tower footing resistance is within permissible limit of 10 Ohms.	Yes/NO		
	10	Availibility of first aid box in the location	Yes/NO		
	11	Wheather used T&Ps have the valid test certificate & also tested by competent person and identified by clour coding or punching.	Yes/NO		
	12	Wheather vertical lifeline is provided on leg of tower	Yes/NO		
	13	Wheather all height fitters have the rope grab type fall arrestor & using the same during ascending/descending	Yes/NO		
	14	Wheather all the tommy bar & spanners have the tag line & fiters are using it at height.	Yes/NO		
	15	Wheather all the slings/wire ropes are protected from sharp edge.	Yes/NO		
	16	Wheather all the U clips provided on the back stay is in same direction & the bolt portion is towards live/tension side of sling	Yes/NO		
	17	Wheather minimum 18 mm of wire rope/sling is used for the back stay	Yes/NO		
	18	Wheather the direction of back stay is 180 degree of existing conductor.	Yes/NO		
	19	Wheather back stay is provided at a distance of minimum 2.5h of tower	Yes/NO		
Paving out of Cond	20	Sequence of paving out is such that to avoid unbalancing of load on tower.	Yes/NO		
	21	Effective communication exists through walkie-talkie and through persons standing on towers for smooth and safe paying out.	Yes/NO		
	22	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter, paving out of conductor etc.	Yes/NO		



		clamp/fittings.	Yes/NO		
Final Sagging and Tension and Conductor	24	No. of sag boards fixed in a section is as per technical specification.	Yes/NO		
	25	After measuring sag, marking/cutting of Earthwire/conductor is done correctly to fix tension clamp/fittings)	Yes/NO		
	26	Wheather winch machine is used for final sagging purpose.	Yes/NO		
	27	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter,etc.	Yes/NO		
	28	Wheather fitters were not present on the cross arm after complete the final sag(quarter fixing) and also not allowed to fitter for removing CAC immediately(within 30minute) after fixing the quarter.	Yes/NO		
	29	Is the 2 nos CAC/Automatic clamp fixed with maintaining of 2 mtr gap between each other during final sag.	Yes/NO		
CLIP-IN	30	For clip in, the marking is done correctly so that suspension clamp/fitting hangs exactly vertical.	Yes/NO		
	31	Before clip-in of conductor, proper earthing/TDR is provided.	Yes/NO		
	32	Minimum Ground Clearance,Clearances over Power line/ Railway line/River Crossing are as per specification.	Yes/NO		
	33	Wheather Retractable type fall arrestor is found & used during movement in suspended insulator, fixing quarter, pave in out of conductor, clip in etc.	Yes/NO		

Name & Sign Of Supervisor Partho Das Name & sign of EHSS Name of EHSO Anoop AT Name & sign of Site engineer

Others



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION

Ref S.L.I.J-A11

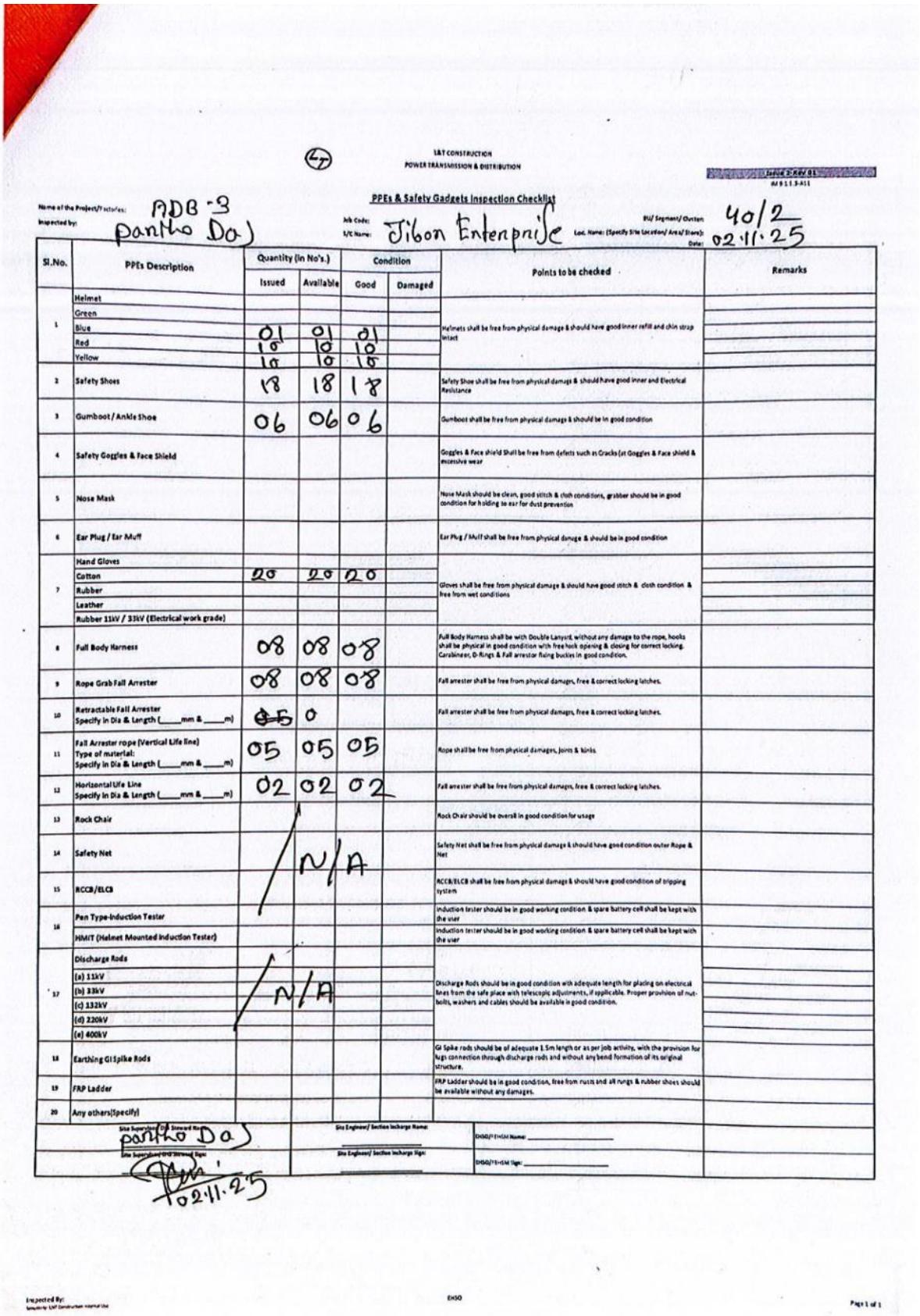
PPEs & Safety Gadgets Inspection Checklist

Name of the Project/Factories: ADB-3 | Job Code: | BU/ Segment/ Cluster: LOC - APOI
Inspected by: Pantho Das | S/C Name: Jibon Enterprise | Loc. Name: (Specify Site Location/ Area/ Store): | Date: 01.12.25

Sl.No.	PPEs Description	Quantity (in No's.) Issued	Available	Condition Good	Damaged	Points to be checked	Remarks
1	Helmet						
	Green						
	Blue	01	01	01		Helmets shall be free from physical damage & should have good inner refit and chin strap intact	
	Red	10	10	10			
	Yellow	10	10	10			
2	Safety Shoes	18	18	18		Safety Shoe shall be free from physical damage & should have good inner and Electrical Resistance	
3	Gumboot / Ankle Shoe	06	06	06		Gumboot shall be free from physical damage & should be in good condition	
4	Safety Goggles & Face Shield					Goggles & Face shield Shall be free from defects such as Cracks (at Goggles & Face shield & excessive wear	
5	Nose Mask					Nose Mask should be clean, good stitch & cloth conditions, grabber should be in good condition for holding to ear for dust prevention	
6	Ear Plug / Ear Muff					Ear Plug / Muff shall be free from physical damage & should be in good condition	
7	Hand Gloves						
	Cotton	20	20	20		Gloves shall be free from physical damage & should have good stitch & cloth condition & free from wet conditions	
	Rubber						
	Leather						
	Rubber 11kV / 33kV (Electrical work grade)						
8	Full Body Harness	08	08	08		Full Body Harness shall be with Double lanyard, without any damage to the rope, hooks shall be physical in good condition with free hook opening & closing for correct locking. Carabiner, D-Rings & Fall arrester Rope buckles in good condition.	
9	Rope Grab Fall Arrester	08	08	08		Fall arrester shall be free from physical damages, free & correct locking latches.	
10	Retractable Fall Arrester Specify in Dia & Length (____mm & ____m)	05	05	05		Fall arrester shall be free from physical damages, free & correct locking latches.	
11	Fall Arrester rope (Vertical Life line) Type of material: Specify in Dia & Length (____mm & ____m)					Rope shall be free from physical damage, joints & kinks.	
12	Horizontal Life Line Specify in Dia & Length (____mm & ____m)	02	02	02		Fall arrester shall be free from physical damages, free & correct locking latches.	
13	Rock Chair	/	N/A			Rock Chair should be overall in good condition for usage	
14	Safety Net					Safety Net shall be free from physical damage & should have good condition outer Rope & Net	
15	RCCB/ELCB					RCCB/ELCB shall be free from physical damage & should have good condition of tripping system	
16	Pen Type-Induction Tester					Induction tester should be in good working condition & spare battery cell shall be kept with the user	
	HMIT (Helmet Mounted Induction Tester)					Induction tester should be in good working condition & spare battery cell shall be kept with the user	
17	Discharge Rods					Discharge Rods should be in good condition with adequate length for placing an electrical lines from the safe place with telescopic adjustments, if applicable. Proper provision of nut-bolts, washers and cables should be available in good condition.	
	(a) 11kV	/	N/A				
	(b) 33kV						
	(c) 132kV						
	(d) 220kV						
	(e) 400kV						
18	Earthing GI Spike Rods					GI Spike rods should be of adequate L.Selength or as per job activity, with the provision for lugs connection through discharge rods and without any bend formation of its original structure.	
19	FRP Ladder					FRP Ladder should be in good condition, free from rusts and all rungs & rubber shoes should be available without any damages.	
20	Any others(Specify)						

Site Supervisor/ O/S Steward Name: Pantho Das | Site Engineer/ Section Incharge Name: | EHSQ/T-O-CM Name:
Site Supervisor/ O/S Steward Sign: 01.12.25 | Site Engineer/ Section Incharge Sign: | EHSQ/T-O-CM Sign:

Inspected By: | EHSQ | Page 1 of 1



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION

Issue 2, Rev 01
M 9.1.1.3-A11

PPEs & Safety Gadgets Inspection Checklist

Name of the Project/Factories: ADB-3
Inspected by: pantho Das
Job Code:
I/C Name: Jibon Enterprise
BU/ Segment/ Custom:
Loc. Name: (Specify Site Location/ Area/ Store): 40/2
Date: 02.11.25

Sl.No.	PPEs Description	Quantity (in No's.)		Condition		Points to be checked	Remarks
		Issued	Available	Good	Damaged		
1	Helmet					Helmets shall be free from physical damage & should have good inner refill and chin strap intact	
	Green						
	Blue	01	01	01			
	Red	10	10	10			
	Yellow	10	10	10			
2	Safety Shoes	18	18	18		Safety Shoe shall be free from physical damage & should have good inner and Electrical Resistance	
3	Gumboot / Ankle Shoe	06	06	06		Gumboot shall be free from physical damage & should be in good condition	
4	Safety Goggles & Face Shield					Goggles & Face shield Shall be free from defects such as Cracks (at Goggles & Face shield & excessive wear	
5	Nose Mask					Nose Mask should be clean, good stitch & cloth conditions, grabber should be in good condition for holding to ear for dust prevention	
6	Ear Plug / Ear Muff					Ear Plug / Muff shall be free from physical damage & should be in good condition	
7	Hand Gloves					Gloves shall be free from physical damage & should have good stitch & cloth condition & free from wet conditions	
	Cotton	20	20	20			
	Rubber						
	Leather						
	Rubber 11kV / 33kV (Electrical work grade)						
8	Full Body Harness	08	08	08		Full Body Harness shall be with Double Lanyard, without any damage to the rope, hooks shall be physical in good condition with free hook opening & closing for correct locking. Carabineer, D-Rings & Fall arrestor fixing buckles in good condition.	
9	Rope Grab Fall Arrester	08	08	08		Fall arrester shall be free from physical damages, free & correct locking latches.	
10	Retractable Fall Arrester Specify in Dia & Length (____mm & ____m)	~~05~~	0			Fall arrester shall be free from physical damages, free & correct locking latches.	
11	Fall Arrester rope (Vertical Life line) Type of material: Specify in Dia & Length (____mm & ____m)	05	05	05		Rope shall be free from physical damages, joints & kinks.	
12	Horizontal Life Line Specify in Dia & Length (____mm & ____m)	02	02	02		Fall arrester shall be free from physical damages, free & correct locking latches.	
13	Rock Chair	/	N/A			Rock Chair should be overall in good condition for usage	
14	Safety Net					Safety Net shall be free from physical damage & should have good condition outer Rope & Net	
15	RCCB/ELCB					RCCB/ELCB shall be free from physical damage & should have good condition of tripping system	
16	Pen Type-Induction Tester					Induction tester should be in good working condition & spare battery cell shall be kept with the user	
	HMIT (Helmet Mounted Induction Tester)					Induction tester should be in good working condition & spare battery cell shall be kept with the user	
17	Discharge Rods	/	N/A			Discharge Rods should be in good condition with adequate length for placing on electrical lines from the safe place with telescopic adjustments, if applicable. Proper provision of nut-bolts, washers and cables should be available in good condition.	
	(a) 11kV						
	(b) 33kV						
	(c) 132kV						
	(d) 220kV						
	(e) 400kV						
18	Earthing GI Spike Rods					GI Spike rods should be of adequate 1.5m length or as per job activity, with the provision for lugs connection through discharge rods and without any bend formation of its original structure.	
19	FRP Ladder					FRP Ladder should be in good condition, free from rusts and all rungs & rubber shoes should be available without any damages.	
20	Any others(Specify)						

Site Supervisor/ Gr. Steward Name: pantho Das
Site Supervisor/ Gr. Steward Sign:
02.11.25
Site Engineer/ Section Incharge Name:
Site Engineer/ Section Incharge Sign:
DGO/ TI-SM Name:
DGO/ TI-SM Sign:

Inspected By:
EHSO
Page 1 of 1

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00
Ref: IM-9.1.1.3-I(A)

FIRE EXTINGUISHER INSPECTION CHECKLIST

Name of the Project/Factories: ADB-3 Project Job Code: LE21M261
BU: TC. Segment/ Cluster: Bangladesh.
Date: 05.10.25 Location: Stone
Fire Extinguisher Identification Number: 01 / RCCB Room.

S. No.	Descriptions	Observations	Measures
1	Condition of the fire extinguisher (Clean/Tidy)	Yes	
2	Physical appearance for corrosion	Yes	
3	Safety pin in position	Yes	
4	Availability & Condition of discharge nozzle	Yes	
5	Availability and condition of hose pipe	Good	
6	Whether storge of fire extinguisher is safe (Expose to direct sunlight)	Yes	
7	Whether access is available to reach fire extinguisher and is free from obstacles	Yes	
8	Whether weight of fire extinguisher match with the actual weight written?	Yes	
9	Inspection & Refill details are available	Yes	
10	Whether last inspection done as per schedule?	Yes	
11	Whether all indicator gauges working?	Yes	

Name & Signature of Store/Admin/P&M

Name & Signature of EHSO/FEHSM

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2 Rev 00
Ref: IM-9.1.1.3-I(A)

FIRE EXTINGUISHER INSPECTION CHECKLIST

Name of the Project/Factories: ADB3 Project Job Code: LE21M261
BU: TL. Segment/Cluster: TL/Bangladesh
Date: 02.12.25 Location: Stone
Fire Extinguisher Identification Number: 01/RCCB:

S. No.	Descriptions	Observations	Measures
1	Condition of the fire extinguisher (Clean/Tidy)	Yes	
2	Physical appearance for corrosion	Yes	
3	Safety pin in position	Yes	
4	Availability & Condition of discharge nozzle	Yes	
5	Availability and condition of hose pipe	Good	
6	Whether storge of fire extinguisher is safe (Expose to direct sunlight)	Yes	
7	Whether access is available to reach fire extinguisher and is free from obstacles	Yes	
8	Whether weight of fire extinguisher match with the actual weight written?	Yes	
9	Inspection & Refill details are available	Yes	
10	Whether last inspection done as per schedule?	Yes	
11	Whether all indicator gauges working?	Yes	

Name & Signature of Store/Admin/P&M

Name & Signature of EHSO/FEHSM

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

TRANSRAIL
Transrail Lighting Limited

Safety Checklist for Erection work

Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011
Rev. No: 00
Date: 01.04.2021

Date of Inspection: 22/08/25

Name of the Project: ADB Project Bangladesh - Scope (F)

Loc. No. 2413 Classification and Type of tower IDL+6

Contractor Shahjalal Erector

Sr. No.	Description	Observation	Remarks
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA	
2	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 -- 10/10 Safety Belt-No in use/ total workers -- 04/10 Safety Shoe-No. in use/total workers -- 10/10 Hand Gloves-No. in use/total worker -- 10/10	
	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 workmen while ascending / descending from the tower.		
3	Check that working underneath the tower is leveled properly.	YES/NO/NA	
4	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). b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.	Derrick Pole = 01 Pulleys (Open & Closed) = 06 Ropes/Slings (Wire Rope) = 02 PP Rope = 06 D Shackles and hooks = 25 Power Winch Machine = 01 Any Other tools =	
5	All nuts and bolts of the stub are fitted and reasonably tightened.	YES/NO/NA	
6	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	
7	Ensure proper guying arrangement for leg & Derrick Pole.	YES/NO/NA	
8	Ensure communication facility is available at the site.	YES/NO/NA	
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	YES/NO/NA	

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TRANSRAIL Transrail Lighting Limited	**Safety Checklist for Erection work**	Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021

10	a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	YES/NO/NA Name:.....	
11	Adequate warning to public nearby ensured.	YES/NO/NA	
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a. Monirul b. Alamin c. Sajv	YES/NO/NA	
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 the name.....
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: 22/05/25

K. K. Mahanta

HSE Officer/Engg.

For Transrail Lighting Ltd

Kishore kumar Mahanta
DG. HSE Engineer

Project Manager

Note:

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)

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TRANSRAIL TransrailLightingLimited	SafetyChecklist forErection work	Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021

Date of Inspection: 13.11.25

Name of the Project.....~~GOPAL GANJ-SHIVCHOR 230KV~~ ADB Project Bangladesh

Loc. No. 32/8 Classification and Type of tower 1QT6+9

Contractor Shahajalal Erector

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	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 -- 12/12 Safety Belt-No in use/ total workers -- 04/12 Safety Shoe-No. in use/total workers -- 12/12 Hand Gloves-No. in use/total worker -- 12/12	
	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 workmen while ascending / descending from the tower.	~~YES~~/NO/NA	
3	Check that working underneath the tower is leveled properly.	~~YES~~/NO/NA	
4	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 HSEPerson & other TLL staff before start of the work). b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.	Derrick Pole = 01 Pulleys (Open & Closed) = 06 Ropes/Slings (Wire Rope) = 05 PP Rope = 06 D Shackles and hooks = 25 Power Winch Machine = 01 Any Other tools =	
5	All nuts and bolts of the stub are fitted and reasonably tightened.	~~YES~~/NO/NA	
6	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	
7	Ensure proper guying arrangement for leg & Derrick Pole.	~~YES~~/NO/NA	
8	Ensure communication facility is available at the site.	~~YES~~/NO/NA	
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	~~YES~~/NO/NA	

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TRANSRAIL TranerailLightingLimited	SafetyChecklist forErection work	Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021

10	a) Ensure for safety measures during tower erection nearroad/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	YES/NO/~~NA~~ Name:.....	
11	Adequate warning to public nearby ensured.	~~YES~~/NO/NA	
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a. Monirul b. Sajal c. Rony	~~YES~~/NO/NA	
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 thename.....
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. **HSE Officer/Engg.** **Project Manager**

Date: 13.11.25

Note:

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)

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Pile Foundation Checklist Package 4

TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/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-Package-04 (Bangladesh) Date of Inspection: 10.11.25

Name of the pile drivers: Sujan Loc No.- 16/0

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?.	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 Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/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	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)
Yes	NO	**Slew and Winch**
✓		Slew ring 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
Yes	NO	**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
✓		Bentonite mud carried out ship tank.
✓		Lubricant oil and other things don't drop the water.
		Noise level & emersion
Yes	NO	**Drill Head**
✓		Guarding installed
		Hydraulics
✓		Anchor points fitted for fall restraint systems
✓		Slides and feed rails not damaged and all bolts, pins/ retainers fitted

Yes	NO	Over the water
		Proper locking of crawler carne
		Crane barricading
		Ship edge fencing
		Life jacket & lifebuoy
		Train Diving & First Aider
		Speed Boat / Motor Boat
		Emergency Numbers display
Yes	NO	**Mast Mountings**
		Bolts, pins and retainers
		Rigging, fittings, sheaves & slings have Manufacture'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 pad wear condition
		Damage, cracks in mounting plates
		Boom angle indicator
Yes	NO	**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
		Jib section pins and retainers
		Warning Signs - **Danger Beware Overhead Wires & Underground Services**
Yes	NO	**Undercarriage**
		Tracks complete and undamaged
		Idlers / Rollers
		Drivers free from leaks
		Track Adjuster Sprockets.
Yes	NO	**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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Checklist for Stringing of Package 4

TRANSRAIL Transrail Lighting Limited	**Safety Checklist for Stringing work**	**Format No:** TRANSRAIL/CONST./HSE/STR-CHKL/012 **Rev. No: 00** **Date: 01.04.2021**

Date of Inspection: 25.11.25

Name of the Project: ANB Bay (a.d/k p-4 (S-D) Project Code: CA-499

Loc. No. 4/0 Section/Stretch from Loc. No. 4/0 to Loc. No. 6/0

Nature of work: Insulator Hosting, Pilot wire/Conductor paying out, Rough Sag, Final sag, Clipping operation etc.

Name of Contractor: Holla TDR

Sr. No.	Description	Observation	Remark
1	Check whether Supervisor/Gang Leader had issued instruction toworkers 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 arrester, Safety belt, shoes, R-Jacket etc.	Safety Helmet- No. in use/ total worker -- 30/30 Safety Belt- No in use/ total worker-- 10/30 Safety Shoe- No. in use/ total worker-- 30/30 Hand Gloves- No. in use/ total worker--30/30	
	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 tightenedand punched properly before starting the job.	YES/NO/NA ✓	
5	Check all members are fitted in towers before undertaking conductorlaying 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 set Puller M/C = 01 set Pulleys (Open & Closed) = 20 Ropes/Slings (Wire Rope) = 30 PP Rope = 09 D Shackles and hooks = 60. Any Other tools = Pilot Rope-07	
7	Check R clips in insulator caps are fixed properly and necessary securitypins (Split pins) are also fixed.	Confirmation of worker/ Contractor: YES/NO ✓ Ground sample checking: YES/NO ✓	
8	Ensure that rollers have Poly Propylene Coating.	a) Confirmation from contractor: YES/NO ✓ b) Sample checking by TLL on rollers lying at ground: YES/NO ✓	

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TRANSRAIL Transrail Lighting Limited	**Safety Checklist for Stringing work**	**Format No:** TRANSRAIL/CONST./HSE/STR-CHKL/012 **Rev. No: 00** **Date: 01.04.2021**

9	Winch, Pulley, TSC machines are properly earthed.	YES/NO/NA
10	Condition of earthling equipment (Electrical tested) and quantity.	YES/NO/NA
11	a) Check that PTW obtained from competent authority for EHV/HV/LT lines, proper earthling of existing lines has been done. b) Ensure earthling should not be done by single worker; one or more experienced worker should accompany him. c) Site engineer/ supervisor to ensure proper earthing done in their presence at both endof section. While removing earthling Site Engineer/Supervisor should be present.	YES/NO/NA YES/NO/NA YES/NO/NA
12	For LT lines, Special precautions have been taken against inadvertent charging and one person is deputed at SEB,s 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 linecrossings. Name of Sr. Officials from TLL available at the site.	YES/NO/NA Name: Sahadat Samad
15	No. of walkie Talkie available at the site.	YES/NO/NA
16	Deployment of Flag men 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. a) TSE Machines b) Conductor drum stand. 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 isin 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. Atanu V. b. Ponir C. c. Rajesh.	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. **HSE Officer/Engg.** **Project Manager**

Date: 25/11/25

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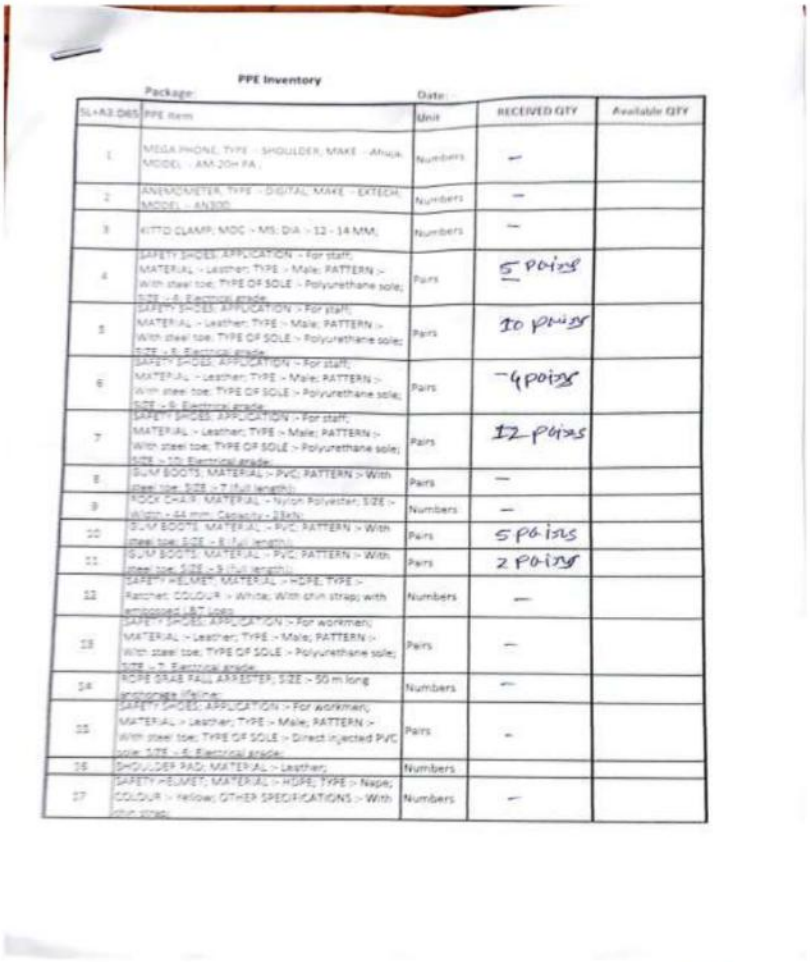
Annexure-28: Environmental Management Implementation Schedule (January– June 2026)

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 1

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co



PPE Inventory

Package: Date:

SL+A3 DES	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE, TYPE :- SHOULDER, MAKE :- Ahuja, MODEL :- AM-20H PA ;	Numbers	–	
2	ANEMOMETER, TYPE :- DIGITAL, MAKE :- EXTECH, MODEL :- AN300;	Numbers	–	
3	KITTO CLAMP; MDC :- MS; DIA :- 12 - 14 MM;	Numbers	–	
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	5 Pairs	
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10 Pairs	
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	-4 pairs	
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 Pairs	
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	–	
9	KICK CHAIN; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	–	
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	5 Pairs	
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	2 Pairs	
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	–	
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	–	
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long	Numbers	–	
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	-	
16	SHOULDER PAD; MATERIAL :- Leather;	Numbers		
17	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	–	

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Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	—	
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	—	
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	—	
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	—	
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	—	
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	—	
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	—	
25	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 8;	Pairs	—	
26	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length- 260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type- front	Sets	—	
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	—	
28	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	—	
29	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- PU; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected single density polyurethane sole; SIZE :- 6;	Pairs	—	
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	—	
31	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load carrying;COLOUR:-Yellow;With chin strap	Numbers	—	

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23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
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32	REFLECTIVE JACKET; MATERIAL :- Polyester (130 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 vest with 2-3 large Velcro;	Sets	-	
33	COTTON HAND GLOVES; GRADE :- Grade 1, Will 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	-	
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	-	
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	-	
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	-	
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	-	
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	-	
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	-	
40	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	-	
41	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	-	
42	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	-	
43	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	-	
44	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	-	
45	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	-	
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	10 NOS	2 NOS
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	4 NOS	1 NOS
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	4 NOS	
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	2 NOS	
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	-	
51	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	-	
52	FIRE BUCKET STAND; TYPE :- T type;	Numbers	2 NOS	

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Hanbaek Co., Ltd **P.O. Box 62241**
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

54	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	10 NOS	5 NOS
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	20 NOS	10 NOS
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	15 NOS	5 NOS
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	8 NOS	3 NOS
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	4 NOS	2 NOS
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	-	
60	TESTER; TYPE :- Pen Type;	Numbers	-	
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	-	
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	2	NO
64	TOOL LIFTING BAG; 25 kg;	Numbers	9 NOS	
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	20 NOS	
66	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	-	
67	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	-	
68	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	6 NOS	
69	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	-	
70	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	2 NOS	

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Package 3

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

PPE Inventory

Package: PKG -3 Date: - 12/29/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	7.0	7.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	7.0	7.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	10.0	10.0
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	5.0	5.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	5.0	5.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	5.0	5.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	5.0	5.0
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 - 23kN;	Numbers	25.0	25.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	25.0	25.0
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; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	200.0	200.0
13	SAFETY SHOES; 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

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	60.0	60.0
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	45.0	45.0
16	SHOULDER PAD; MATERIAL :- Leather;	Numbers	200.0	200.0
17	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	300.0	300.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	10.0	10.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	1000.0	1000.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	0.0	0.0
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	120.0	120.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	20.0	20.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	100.0	100.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	10.0	10.0
25	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 8;	Pairs	45.0	45.0
26	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	500.0	500.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	40.0	40.0
28	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	120.0	120.0
29	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- PU; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected single density polyurethane sole; SIZE :- 6;	Pairs	5.0	5.0
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	10.0	10.0
31	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load carrying;COLOUR:-Yellow;With chin strap	Numbers	40.0	40.0
32	REFLECTIVE JACKET; MATERIAL :- Polyester (130 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 vest with 2-3 large Velcro;	Sets	43.0	43.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	0.0	0.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	20.0	20.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	190.0	190.0
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0	10.0
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	10.0	10.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	10.0	10.0
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	10.0	10.0
40	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	10.0	10.0
41	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	100.0	100.0

L&T CONSTRUCTION

POWER TRANSMISSION & DISTRIBUTION IC

42	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	20.0	20.0
43	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	30.0	30.0
44	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	30.0	30.0
45	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	40.0	40.0
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	10.0	10.0
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	6.0	6.0
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	24.0	24.0
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	1.0	1.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	10.0	10.0
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	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 :- Helmet mountable induction type;	Numbers	20.0	20.0
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	50.0	50.0
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 :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	30.0	30.0
59	TESTER; TYPE :- Helmet mountable 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 mm2; WIRE LENGTH :- 13 m;	Numbers	30.0	30.0

Package 4

PPE Inventory

Package: 04 Date: - 30.12.2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	4.0	4.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	2.0	2.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	15.0	12.0
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	50.0	15.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	150.0	35.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	80.0	25.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	2.0	1.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	[redacted]	[redacted]
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	50.0	10.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	150.0	25.0
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	200.0	48.0
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	16.0	8.0
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	50.0	10.0
16	SHOULDER PAD; MATERIAL :- Leather;	Numbers	100.0	20.0
17	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	200.0	60.0
18	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	16.0	10.0

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19	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	25.0	10.0
20	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	200.0	50.0
21	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	60.0	25.0
22	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	500.0	180.0
23	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	50.0	50.0
24	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	500.0	100.0
25	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	20.0	20.0
26	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	20.0	20.0
27	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	40.0	25.0
28	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	15.0	15.0
29	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	50.0	25.0
30	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	4.0	4.0
31	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	15.0	15.0
32	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	3.0	3.0

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Package 5

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PPE Inventory

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

Date 31.12.2025

SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	3.0	3.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	0.0	0.0
3	KITTO 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	17.0	17.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	16.0	16.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	20.0	20.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	15.0	15.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	25.0	25.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	15.0	15.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	22.0	22.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	30.0	30.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	25.0	25.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	10.0	10.0
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	6.0	6.0
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	15.0	15.0
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	18.0	18.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	15.0	15.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	65.0	65.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	12.0	12.0
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	3.0	3.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	2.0	2.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	8.0	8.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	15.0	15.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
25	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 8;	Pairs	7.0	7.0
26	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	125.0	125.0
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	8.0	8.0
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 :- 6;	Pairs	8.0	8.0
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	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; 3M 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	55.0	55.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	120.0	120.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	30.0	30.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	5.00	5.00
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0	10.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
37	SAFETY SHOES, MATERIAL :- PU, TYPE :- Male, PATTERN :- With fibre toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 5, Electrical grade,	Pairs	20.0	20.0
38	SAFETY SHOES, MATERIAL :- PU, TYPE :- Male, PATTERN :- With fibre toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 6, Electrical grade,	Pairs	20.0	20.0
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 GSM), COLOUR :- Orange Red, SIZE :- Medium (M), With full sleeves,	Numbers	10.0	10.0
42	SAFETY SHOES, MATERIAL :- PU, TYPE :- Male, PATTERN :- With fibre toe, TYPE OF SOLE :- Polyurethane sole, SIZE :- 9, Electrical grade,	Pairs	15.0	15.0
43	SAFETY HELMET, MATERIAL :- HDPE, TYPE :- Nape, COLOUR :- Red, With chin strap,	Numbers	6.0	6.0
44	SAFETY HELMET, MATERIAL :- HDPE, TYPE :- Nape, COLOUR :- Red, With chin strap,	Numbers	8.0	8.0
45	SURGICAL ITEMS, Reusable Washable Rubber Gloves	Pairs	10.0	10.0
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	0.0	0.0
47	FIRE EXTINGUISHER ABC TYPE, CAPACITY :- 4 kg,	Numbers	15.0	15.0
48	FIRE BUCKETS, CAPACITY :- 9 L, NUMBERS :- 3, OTHER SPECIFICATIONS :- With Stand & Canopy,	Numbers	10.0	10.0
49	MEDICINES, HAND SANITIZER REFIFIL 5 LTR	Numbers	5.0	5.0
50	CO2 GAS TYPE FIRE EXTINGUISHER, CAPACITY :- 5 kg, OTHER SPECIFICATIONS :- Wall mounted With stand,	Numbers	3.0	3.0
51	CO2 GAS TYPE FIRE EXTINGUISHER, TYPE :- CO2, CAPACITY :- 6.5 kg, OTHER SPECIFICATIONS :- Wall mounted,	Numbers	3.0	3.0
52	FIRE BUCKET STAND, TYPE :- T type,	Numbers	5.0	5.0
54	SAFETY BARRICADE TAPE, MATERIAL :- LDPE, TYPE :- Reflective, COLOUR :- Red & white stripes, WIDTH :- 75 mm, THICKNESS :- 50 microns, OTHER SPECIFICATIONS :- 500 m roll,	Numbers	25.0	25.0
55	TESTER, TYPE :- Helmet mountable induction type,	Numbers	12.0	12.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	3.0	3.0
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	15.0	15.0
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	5.0	5.0
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	15.0	15.0
60	TESTER; TYPE :- Pen Type;	Numbers	5.0	5.0
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	3.0	3.0
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	22.0	22.0
64	TOOL LIFTING BAG; 25 kg;	Numbers	3.0	3.0
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	2.0	2.0
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 :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	20.0	20.0
68	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	3.0	3.0
69	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	0.0	0.0
70	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	0.0	0.0

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Package 6

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PPE Inventory

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

Date 31.12.2025

SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	5.0	3.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	0.0	0.0
3	KITTO 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	20.0	17.0
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	16.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	15.0	20.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	18.0	15.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	22.0	25.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	17.0	15.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	20.0	22.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	35.0	30.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	20.0	25.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	15.0	10.0
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	8.0	6.0
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	12.0	15.0
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	18.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	18.0	15.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	70.0	65.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	10.0	12.0
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	5.0	3.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	3.0	2.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	7.0	8.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	18.0	15.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
25	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 8;	Pairs	5.0	7.0
26	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	120.0	125.0
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	10.0	8.0
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 :- 6;	Pairs	10.0	8.0
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	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; 3M 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	50.0	55.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	110.0	120.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	25.0	30.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	7.0	5.0
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0	10.0

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SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	25.0	20.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	18.0	20.0
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	18.0	15.0
40	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	0.0	0.0
41	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	12.0	10.0
42	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	10.0	15.0
43	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	8.0	6.0
44	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	6.0	8.0
45	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	12.0	10.0
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	0.0	0.0
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	12.0	15.0
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	15.0	10.0
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	7.0	5.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	2.0	3.0
51	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	2.0	3.0
52	FIRE BUCKET STAND; TYPE :- T type;	Numbers	5.0	5.0
54	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	30.0	30.0
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	15.0	12.0

CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD
Da Cheng Building, No. 8, Nanheng East Street, Xicheng District, Beijing 100052, China
Tel: 86-10-63412099 Fax: 86-10-63412040
www.cet.sgcc.com.cn

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

国家电网
STATE GRID
中国电力技术装备有限公司
CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD

SL. No.	PPE Item	Unit	RECEIVED QTY	Available QTY
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	5.0	3.0
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	20.0	15.0
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	6.0	5.0
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	10.0	15.0
60	TESTER; TYPE :- Pen Type;	Numbers	7.0	5.0
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	5.0	3.0
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	20.0	22.0
64	TOOL LIFTING BAG; 25 kg;	Numbers	5.0	3.0
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	3.0	2.0
66	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	15.0	10.0
67	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	25.0	20.0
68	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	5.0	3.0
69	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	0.0	0.0
70	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	0.0	0.0

CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD
Da Cheng Building, No. 8, Nanheng East Street, Xicheng District, Beijing 100052, China
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www.cetagec.com.cn

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 7

PPE Inventory
Project Name: 230/132/33/kv GIS SS, Rupsha

Package: 7 Date: - 1/12/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	2.0	2.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	0.0	0.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	0.0	0.0
4	EAR BUD: Xiaomi	Numbers	3.0	2.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	0.0	0.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0	5.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	50.0	30.0
8	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	100.0	20.0
9	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	0.0	5.0
10	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	0.0	0.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	10.0	5.0
12	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	15.0	10.0
13	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	20.0	5.0
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 :- 50 m long anchorage lifeline;	Numbers	2.0	2.0

PPE Inventory
Project Name: 230/132/33/kv GIS SS, Rupsha

Package: 7 Date: - 1/12/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
16	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	0.0	0.0
17	SHOULDER PAD; MATERIAL :- Leather;	Numbers	0.0	0.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	250.0	50.0
19	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; 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	30.0	10.0
21	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	10.0	2.0
22	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	0.0	0.0
23	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 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 swivel snap hook anchorage eye with swivel action;	Numbers	0.0	0.0
24	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	N/A	
25	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	10.0	5.0
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 (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	150.0	60.0

PPE Inventory
Project Name: 230/132/33/kv GIS SS, Rupsha

Package: 7 Date: - 1/12/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
28	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	0.0	0.0
29	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	12.0	10.0
30	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- PU; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected single density polyurethane sole; SIZE :- 6;	Pairs	0.0	0.0
31	ANCHORAGE LINE; MATERIAL :- POLYAMIDE 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 (130 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 vest with 2-3 large Velcro;	Sets	0.0	0.0
34	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	50.0	30.0
35	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	5.0	2.0
36	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	30.0	10.0
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	0.0	0.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	0.0	0.0
39	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	0.0	0.0
40	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	5.0	2.0
41	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	0.0	0.0
42	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	5.0	2.0

PPE Inventory
Project Name: 230/132/33/kv GIS SS, Rupsha

Package: 7 Date: - 1/12/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
43	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	4.0	3.0
44	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	0.0	0.0
45	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	0.0	0.0
46	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	7.0	5.0
47	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	2.0	2.0
48	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	6.0	4.0
49	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	6.0	4.0
50	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	5.0	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 :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	4.0	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 :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	N/A	
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	N/A	
56	Safety Mannequin ; 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 :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	N/A	
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	N/A	
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	N/A	
60	TESTER; TYPE :- Pen Type;	Numbers	N/A	
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	N/A	

PPE Inventory
Project Name: 230/132/33/kv GIS SS, Rupsha

Package: 7 Date: - 1/12/2025

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
62	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; 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 support;	Numbers	N/A	
65	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	N/A	
66	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	N/A	
67	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	N/A	
68	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	N/A	
69	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	N/A	

Annexure-30: Incident Register

Package 1

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

Accident & Incident Register

Project Information

- **Project Title:** Design, Supply, Installation, Testing & Commissioning of 400kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1)
- **Contract No.:** PGCB/ADB/3853-BAN/DWZTGAP/400kV & 230kV LILO/P1
- **Contract Date:** 25.09.2023
- **Employer / Client:** Power Grid Company of Bangladesh (PGCB)
- **Funding Agency:** Asian Development Bank (ADB)
- **Contractor:** ___Handbaek Co. Ltd_____
- **Project Location:** Kaliganj, Gazipur

Purpose of Accident & Incident Register

This register is maintained to record all accidents, incidents, near misses, and dangerous occurrences at the project sites in order to ensure compliance with Occupational Health & Safety (OHS) requirements, ADB Safeguard Policy Statement (SPS), and national labor laws, and to prevent recurrence through corrective and preventive actions.

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

Accident & Incident Register Format

Sl. No.	Date & Time of Incident	Location / Work Area	Name of Injured Person	Employee ID	Designation	Type (Accident / Incident / Near Miss)	Nature of Injury / Incident	Cause of Incident	Immediate Action Taken	Medical Treatment Given (First Aid / Hospital)	Lost Time (Yes/No)	No. of Lost Days	Reported To (Supervisor / Safety Officer / PGCB)	Corrective & Preventive Action	Responsible Person	Status (Open / Closed)	Date Closed	Remarks
1	4th Nov,2026	T 4/1	Mr. Akram	17	Helper	Hand Lacer-ation	minor	No hand gloves were worn	Bandage	First Aid	No	No	Safety Officer	Wear Hand Gloves Mendatory	Mr. Arif	Closed	4th Nov, 2026	Awareness is mandatory
2																		
3																		

Classification of Accidents (Indicative)

- **Fatal Accident**
- **Major Injury** (fracture, amputation, hospitalization >24 hours)
- **Minor Injury** (first aid only)
- **Near Miss** (no injury but potential risk)
- **Property Damage / Equipment Damage**

Reporting & Investigation Procedure

1. Incident to be reported immediately to Supervisor and Safety Officer
2. Site secured and first aid / emergency response provided

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Hanbaek Co., Ltd P.O. Box 62241
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3. Incident investigation conducted within 24–48 hours
4. Root cause analysis and corrective actions identified

Hanbaek Co., Ltd **P.O. Box 62241**
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

5.
6. Record updated and shared with PGCB / ADB as required

Declaration

All accidents, incidents, and near misses shall be reported without delay. No worker shall be penalized for reporting safety incidents.

Authorization

Approved By



Subir Singha

General Manager

Note: This register shall be maintained at site and reviewed regularly during safety meetings. Serious accidents shall be reported to PGCB and ADB within 24 hours as per contractual and safeguard requirements.

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Package 4

TRANSRAIL
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: F/CONST./FOR/009A
Rev. No: 02
Date: 01.03.2024

Name of Site / Line / Factory / Office:	ADB Bangladesh (A-499)		
Incident Investigation Report No.	01.	Date of Investigation:	26.09.25
Location/Area:	18/2	Date of Incident	25.09.25
Department:	Construction	Time of Incident:	4.30pm
Employee (Company/Contractor)	Contractor		
Name of the Contractor (If applicable)	Mollo tdr.		
Name of Injured Employee (Not Applicable in case of Near-Miss)	-NA-		
Designation:	-NA-		
Name of Person Reporting the Incident	Gulam mustafa.		

Incident Descriptions/Sequence of Events A near miss incident occurred while a workman was throwing stones on to the mixture M/C dram, unfortunately, some of the stones hit the mixture M/C operator, no property damage no any injure.

Findings:: While a workman was throwing stone on to the M/C dreum, unfortunetlly some of the stones hit the mixture M/C optr.

Root Cause of Incident The root cause of the incident was the lack of proper communication & ~~condition between~~ Coordination between the workman and the mixture M/C optr.

Name of Witness: md samrat.

Worker Participation & Consultation:
md samrat.
md Gulam mustafa.

Recommendations/Corrective Actions provide additional Training on safe material handling practices for workers.

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.
- Risk Register to be reviewed accordingly to the activities/operations found.

Page 1 of 1

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TRANSRAIL 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: F/CONST./FOR/009A Rev. No: 02 Date: 01.03.2024

Name of Site / Line / Factory / Office:			
Incident Investigation Report No.	**01**	Date of Investigation:	**30.08.2025**
Location/Area:	**Store**	Date of Incident	**29.08.2025**
Department:	Construction	Time of Incident:	**10.30**
Employee (Company/Contractor)	Contractor		
Name of the Contractor (If applicable)	NRZ Transport		
Name of Injured Employee (Not Applicable in case of Near-Miss)	**NA**		
Designation:	**NA**		
Name of Person Reporting the Incident	**Sujit chokroborty**		

Incident Descriptions/Sequence of Events: *A near miss incident occurred during the unloading of materials (insulators) from a truck at our store. A broken piece of insulator fell in front of a store laborer, but fortunately, no property damage or injuries were sustained*

Findings:
. During the unloading of materials (insulators) from a truck at our store. A broken piece of insulator fell in front of a store laborer.

Root Cause of Incident- *Primary Cause: Transportation issues due to bad road conditions.*
Insulators not properly secured or padded during transport

Name of Witness: ***Anik mondol***

Worker Participation & Consultation:
1)alomgir

2) ***hassan***

Recommendations/Corrective Actions:
Driver Training: Provide training to drivers on proper handling and securing of fragile cargo.

Worker/Worker Representative	Safety Officer	HOD (Concerned/Site In charge)	Regional/Factory Head

Effectiveness of Corrective Action:

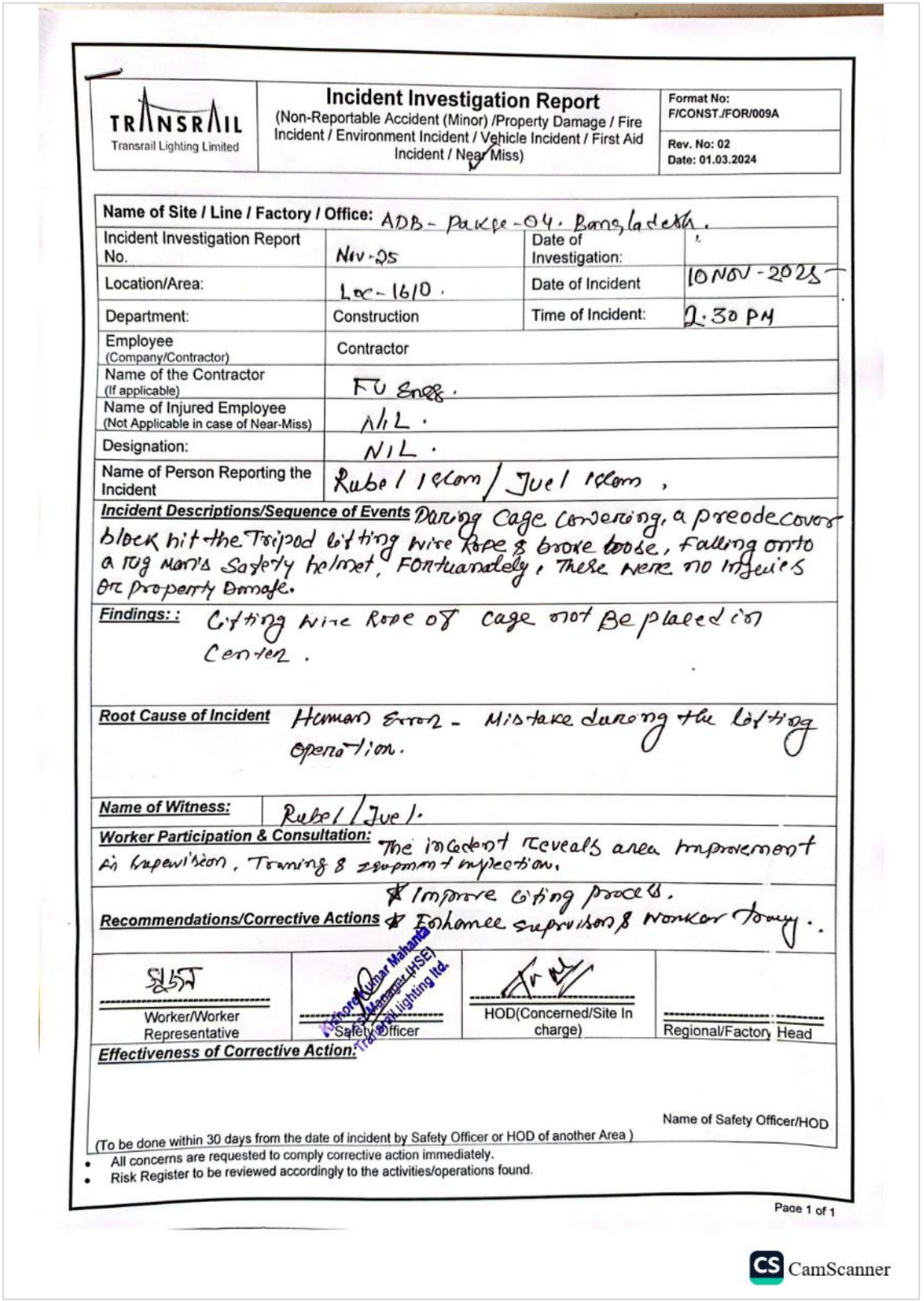
Name of Safety Officer/HOD

(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

CamScanner



TRANSRAIL
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: F/CONST./FOR/009A
Rev. No: 02
Date: 01.03.2024

Name of Site / Line / Factory / Office:	ADB - Package-04. Bangladesh.		
Incident Investigation Report No.	Nov-25	Date of Investigation:	
Location/Area:	Loc-1610.	Date of Incident	10 NOV-2025
Department:	Construction	Time of Incident:	2.30 PM
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	Rubel / Jubel / Jubel,		

Incident Descriptions/Sequence of Events During Cage Lowering, a preodecovos block hit the Tripod lifting wire Rope & broke loose, Falling onto a Rig Man's Safety helmet, Fortunately, There were no Injuries or Property Damage.

Findings: : Lifting Wire Rope of Cage not Be placed on Center.

Root Cause of Incident Human Error - Mistake during the lifting Operation.

Name of Witness: Rubel / Jubel.

Worker Participation & Consultation: The incident reveals area improvement in supervision, Training & equipment inspection.

Recommendations/Corrective Actions
* Improve lifting procedure.
* Enhance supervision & Worker Training.

Worker/Worker Representative	Safety Officer	HOD(Concerned/Site In charge)	Regional/Factory Head
	Tushar Kumar Mahanta, Manager (HSE), Transrail lighting ltd.		

Effectiveness of Corrective Action:

Name of Safety Officer/HOD

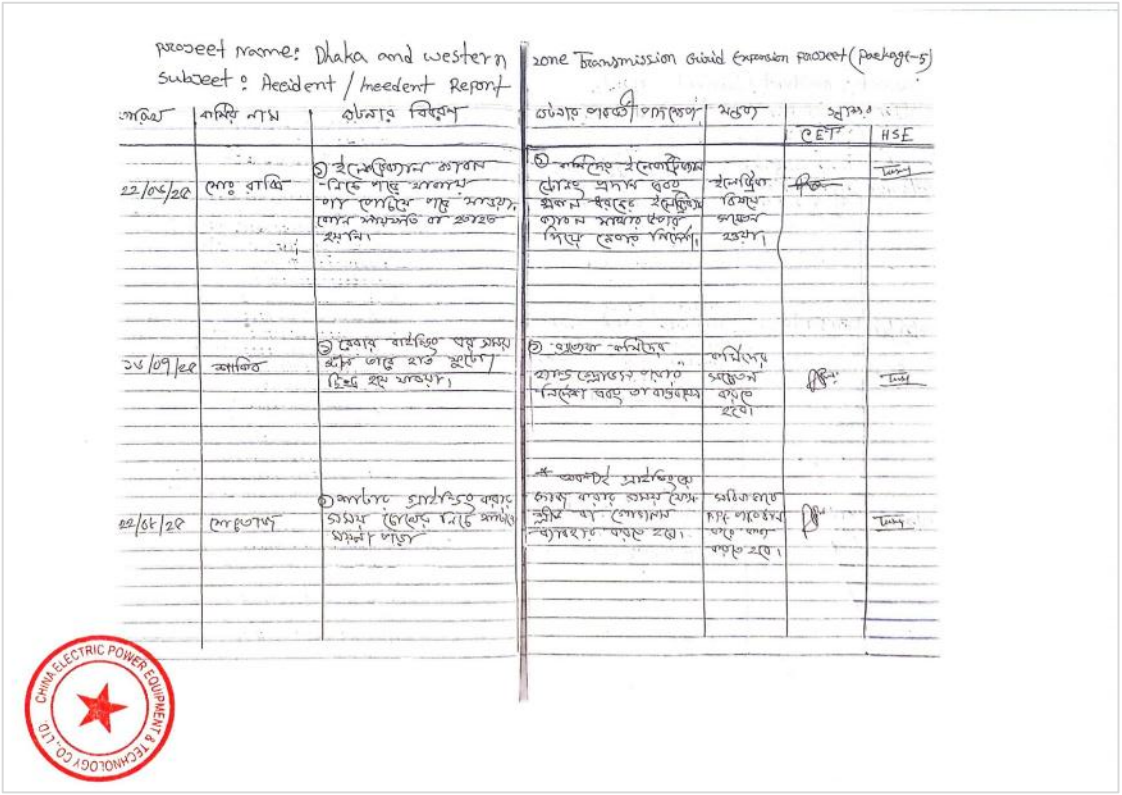
(To be done within 30 days from the date of incident by Safety Officer or HOD of another Area)

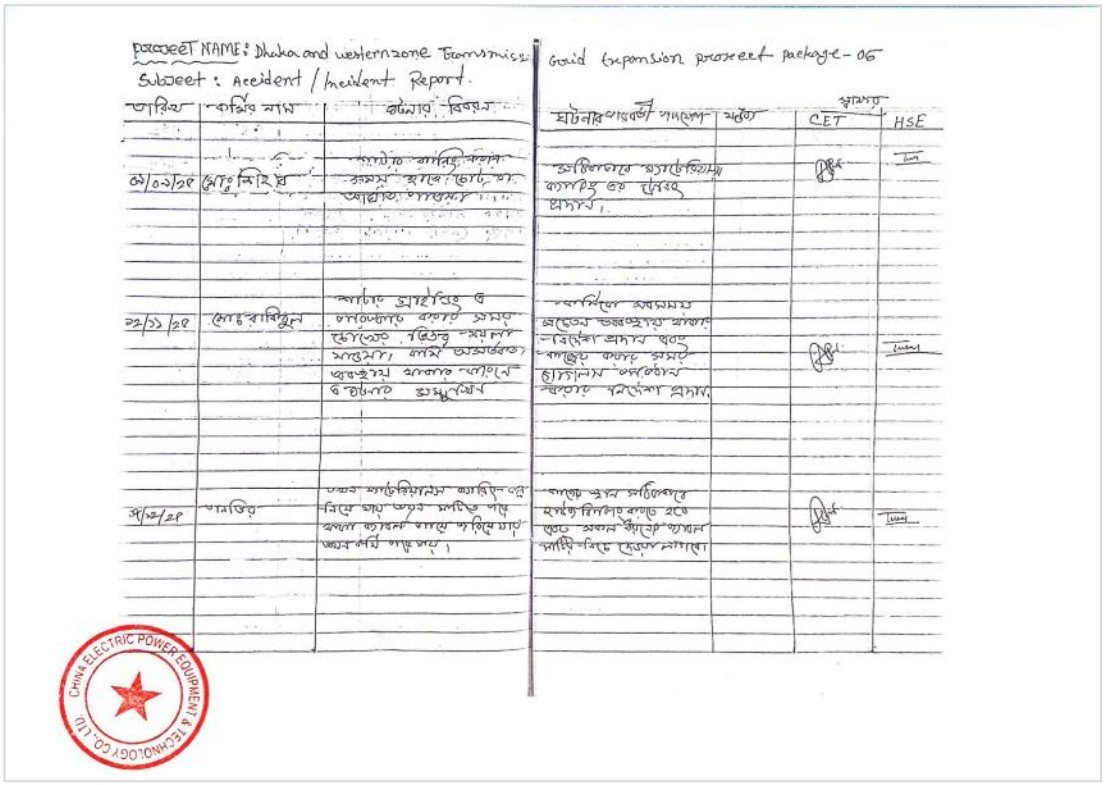
- All concerns are requested to comply corrective action immediately.
- Risk Register to be reviewed accordingly to the activities/operations found.

Page 1 of 1

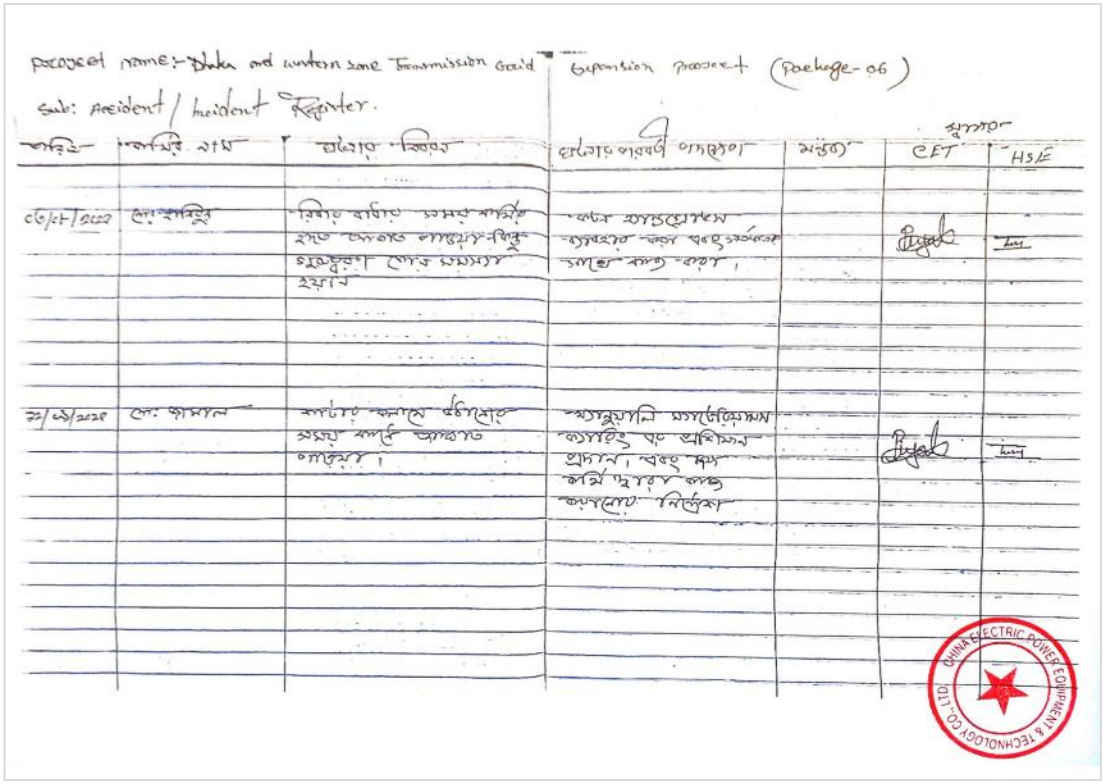
CamScanner

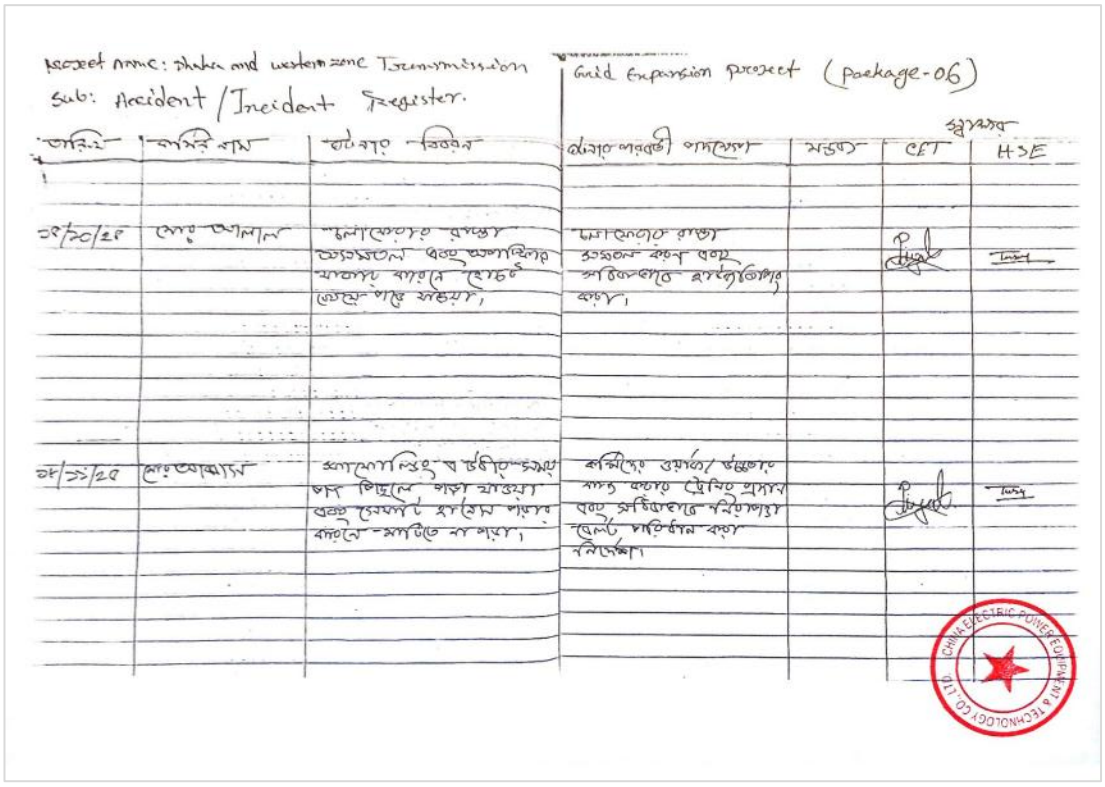
Package 5


Project Name: Dhaka and western zone Transmission Grid Expansion Project (Package-5)
Subject: Accident / Incident Report
CET
HSE
CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD


Project NAME: Dhaka and western zone Transmiss
Grid expansion project package-06
Subject: Accident / Incident Report
CET
HSE
CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD

Package 6


Project name: Dhaka and western zone Transmission Grid Expansion project (Package-06)
Sub: Accident / Incident Register.
CET
HSE


Project name: Dhaka and western zone Transmission Grid Expansion project (Package-06)
Sub: Accident / Incident Register.
CET
HSE

Package 7

PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv 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)

SITE NAME
230/132/33kV GIS Substation at Rupsha

DOCUMENT NAME
Incident Report Sep-25

CamScanner

MAZUMDER ENTERPRISE

EPC AGENT, CONSULTANT, INDENTOR, IMPORTER & EXPORTER

FINAL INCIDENT REPORT

REFERENCE NUMBER:	04	SECTION:	Construction
REPORTED DATE & TIME:	11.09.25	LOCATION:	Site Office
REPORTED BY:	Md Habibullah Bahar	POSITION:	EHS Engineer

DETAILS OF THE INCIDENT

INCIDENT CLASSIFICATION:							
	LOSS TIME INCIDENT		LOSS DAY CASE		RESTRICTED WORK CASE		MEDICAL TREATMENT CASE
	FIRST AID CASE	X	PROPERTY DAMAGE		NEAR MISS CASE		ENVIRONMENTAL CASE
			SECURITY CASE		3RD PARTY CASE		OTHERS:

VICTIM DETAILS:									
INCIDENT PERSON:	n/a			SEX:	Male	NID NUMBER:		n/a	
BIRTH DATE:	n/a			AGE:	n/a	NATIONALITY:		Bangladeshi	
HOSPITALIZATION:	YES	n/a	NO	n/a	CLINIC:	YES	n/a	NO	n/a
NATURE OF INJURY:	n/a			PART OF THE BODY INJURED:		Leg			
OCCUPATION OF IP:	n/a			DATE OF JOINING:		11.07.25			
COMPANY:	Mazumdar Enterprise			ACTIVITY WHEN INCIDENT HAPPENS:		Working point going Time			

BRIEF DESCRIPTION OF THE INCIDENT:

On 03 Oct 2025 (Saturday) at around 11:20 AM, Incident happened at Rupsha 230/132/33 kv GIS Sub Station. As per investigation & according to ME Project Manager MD Faisal and EHS Engineer Md Habibullah Bahar, instructed them to working point going time Used PPE.

ROOT CAUSE:

1. Worker physical activist un fight
2. Stairs not good housekeeping

CURRENT STATUS & ACTION TAKEN:

1. He was taken to doctor. And given Medical Treatment.
2. He is now Physically good

REMEDIAL / CORRECTIVE ACTION:

1. Stairs good housekeeping
2. Stairs Provide Hard Railing

PREPARED BY:	Md Habibullah Bahar	POSITION:	EHS Engineer	SIGN:	
CHECK BY:	Md Faisal	POSITION:	Project MANAGER	SIGN:	

Image Incident Person





Revision

Form- WD1-S-036C FINAL INCIDENT

CamScanner

ENTERPRISE

EPC AGENT, CONSULTANT, INDENTOR, IMPORTER & EXPORTER

FINAL INCIDENT REPORT

ENGINEERS / EMPLOYERS COMMENT:			
Now worker is goes to rest for one month duration when he comfort he join to the work,			
DATE:	NAME:	POSITION:	SIGNATURE:
11.09.2025	Md. Habibullah	~~Habibullah~~ Safety officer	Habibullah

Revision

Form- WD1-S-036C FINAL INCIDENT

CamScanner

PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv GIS SUBSTATION AT PHULTOLA, MONIRAMPUR, MAHESHPUR, MEHERPUR ON TURNKEY BASIS (PACKAGE-7)

EMPLOYER	CONTRACTOR	SUB-CONTRACTOR
	CMEC CNEEC	MAZUMDER ENTERPRISE
POWER GRID COMPANY OF BANGLADESH LTD. (PGCB)	CMEC-CNEEC Joint venture	MAZUMDER ENTERPRISE (ME)

SITE NAME
230/132/33kV GIS Substation at Rupsha

DOCUMENT NAME
Incident Report Nov-25

CamScanner

MAZUMDER ENTERPRISE

EPC AGENT, CONSULTANT, INDENTOR, IMPORTER & EXPORTER

FINAL INCIDENT REPORT

REFERENCE NUMBER:	05	SECTION:	Construction
REPORTED DATE & TIME:	03.11.25	LOCATION:	Site Office
REPORTED BY:	Md Habibullah Bahar	POSITION:	EHS Engineer

DETAILS OF THE INCIDENT

INCIDENT CLASSIFICATION:							
	LOSS TIME INCIDENT		LOSS DAY CASE		RESTRICTED WORK CASE		MEDICAL TREATMENT CASE
	FIRST AID CASE	X	PROPERTY DAMAGE		NEAR MISS CASE		ENVIRONMENTAL CASE
			SECURITY CASE		3RD PARTY CASE		OTHERS:

VICTIM DETAILS:									
INCIDENT PERSON:	n/a			SEX:	Male	NID NUMBER:		n/a	
BIRTH DATE:	n/a			AGE:	n/a	NATIONALITY:		Bangladeshi	
HOSPITALIZATION:	YES	n/a	NO	n/a	CLINIC:	YES	n/a	NO	n/a
NATURE OF INJURY:	n/a			PART OF THE BODY INJURED:		Hand			
OCCUPATION OF IP:	n/a			DATE OF JOINING:		25.10.25			
COMPANY:	Mazumdar Enterprise			ACTIVITY WHEN INCIDENT HAPPENS:		Working point going Time			

BRIEF DESCRIPTION OF THE INCIDENT:

On 03 Oct 2025 (Saturday) at around 11:20 AM, Incident happened at Rupsha 230/132/33 kv GIS Sub Station . As per investigation & according to ME Project Manager MD Faisal and EHS Engineer Md Habibullah Bahar, Instructed them to working point going time Used PPE.

ROOT CAUSE:

1. Worker physical activist un fight
2. Stairs not good housekeeping

CURRENT STATUS & ACTION TAKEN:

1. He was taken to doctor. And given Medical Treatment.
2. He is now Physically good

REMEDIAL / CORRECTIVE ACTION:

1. Stairs good housekeeping
2. Stairs Provide Hard Railing

PREPARED BY:	Md Habibullah Bahar	POSITION:	EHS Engineer	SIGN:	
CHECK BY:	Md Faisal	POSITION:	Project MANAGER	SIGN:	

Image Incident Person



Revision

Form- WD1-S-036C FINAL INCIDENT

CamScanner

MAZUMDER ENTERPRISE

EPC AGENT, CONSULTANT, INDENTOR, IMPORTER & EXPORTER

FINAL INCIDENT REPORT

ENGINEERS / EMPLOYERS COMMENT:			
The worker now okay. He already prepared to join the work.			
DATE:	NAME:	POSITION:	SIGNATURE:
03.11.25	Hakibul Lah	Safety Engineer	Hakibul Lah

Revision

Form- WD1-S-036C FINAL INCIDENT

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Annexure-31: TBT Participant List

Package 1

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

TOOL BOX MEETING ATTENDANCE SHEET

Project Name: Design, Supply, Installation, Testing & Commissioning of 400kv and 230kv TL
Location: Kaligaj, Gazipur.
Date: 13.11.2025 **Time:** 9:30 AM

No.	Name of Worker	Designation	Signature
1	Md. Rubel Sheak	Site Engineer	
2	Md. omor Faruk	Supervisor	
3	Sazzad Molla	Lineman	
4	Iman Huseu	〃	
5	Soyon Molla	〃	
6	Baizid Sheikh	〃	
7	Shirajul Islam	〃	
8	Fankal Hossen	〃	
9	Sagor Molla	〃	
10	Sohoto Sarder	〃	

Supervisor / Safety Officer Name: Mohosin 01310027501

Signature: **Date:** 13.11.2025

HANBAEK CO., LTD. hanbaek KOREA

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Package 3

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00

Ref: IM- 8.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project :132 /230 KV D/C ADB-3 Project.

Location : BR/O

Name of the Section In-charge : UKDP & Vijay Kumar

Name of the EHSO : Anoop AT

Name of the Sub-Contractor/Dept.: Sayem Engineering

Number of workmen present : 16 Nos

Date & Time : 15.07.25 (07.35am).

Topics discussed : Cadinal Rules 1, 2 and 3, P.P.E

Response of workmen : Good

Remark / Any significant problem identified: N/A

Signature:

Site Engineer

EHSO

(P.T.O)

Page 1 of 2

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Re
Ref: IM- 8.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project :132 /230 KV D/C ADB-3 Project.

Location : 139/M

Name of the Section In-charge : UKDP & Vijay Kumar

Name of the EHSO : Anoop AT

Name of the Sub-Contractor/Dept.: Sayem E.

Number of workmen present : 16 Nos

Date & Time : 08.08.25, 07.18 am

Topics discussed : Cardinal Rules 1, 2 and 3 P.P.E

Response of workmen : Good

Remark / Any significant problem identified: N/A

Signature:

Site Engineer

EHSO

(P.T.O)

Page 1 of 2

Sensitivity: L&T Construction Internal Use

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L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev

Ref: IM- 8.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project :132 /230 KV D/C ADB-3 Project.

Location : 36/0

Name of the Section In-charge : UKDP & Vijay Kumar

Name of the EHSO : Anoop AT

Name of the Sub-Contractor/Dept.: Jibon Enterprise

Number of workmen present : 18

Date & Time : 27.11.25, 07.50am

Topics discussed : Cadinal Rules 1,2 and 5 P.P.E

Response of workmen : Good

Remark / Any significant problem identified: N/A

Signature: ---------- Site Engineer

27.11.25 (EHSS)
---------- EHSO

(P.T.O)

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Sensitivity: LNT Construction Internal Use

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00

ATTENDANCE SHEET FOR PEP-TALK

Date: 27.11.25
Location: 3610
Topics: P.P.E

In Time: 09.50 am
Out Time: 05.15PM

Conducted By: Md. Ahsan Habib

Sl. No.	Name	Designation	Signature
1	Rajul Karim Raza	Forman	
2	Shahariya	F	
3	Jakir Khan	F	
4	Rayhan	H	
5	Hadiul	H	
6	Imamul	H	
7	Sabbir Rahman	H	
8	Maruf	F	
9	Jad Chad	F	
10	Ilaes	H	
11	Saikab	F	
12	Samim	D.M	
13	Mamun	D.M	
14	Sabag	F	
15	Sohag	H	
16	Alogir	H	
17	Mahedi Hasan	H	
18	Sagor	P	
19			

Signature of Trainer ----------

Page 2 of 2

nsitivity: LNT Construction Internal Use

Package 4

TRANSRAIL
Transrail Lighting Limited

Toolbox Meeting / Pep Talk

Format No: TRANSRAIL/CONST./HSE/TBM/016
Rev. No: 00
Date: 01.04.2021

NAME OF THE PROJECT: 132KVDC Domar to Hatibandha TL Scope - B PROJECT CODE: G-479
TOOL BOX/MEETING DATE: 12.07.25
LOC./VENUE: TT-2
TIME: 8:15 AM
Number of workers Participation: 13
TOPIC Discussed: (As per work process) 1. Always wash your hands before eat.
2. Clean your body everyday.
3. Wear all the PPE's before work.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	
1	Suman Rai	সুমন	10	Datu Dhar	দেবু
2	Shafiq Rai	শফিক	11	Rashed Patra	রাশেদ
3	Md. Saddam	সাদ্দাম	12	Jahangir Akonda	জাহাঙ্গীর
4	Sohel Bapari	সোহেল	13	Md. Rofia	রফিক
5	Ala Mia	আলামিয়া	14		
6	Rahmat Ali	রহমত	15		
7	Ali Asgar	আসগর	16		
8	Kanak Das	কনক	17		
9	Snabon Paul	শ্রাবণ	18		

Signature of Site Supervisor/ Site Engg. | HSE Officer/Engg. | Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

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CONTROLLED

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 KV D/C Donar to Hatibandha T/L PROJECT CODE: BJ-479
Scope-E

TOOL BOX/MEETING DATE: 10.07.25

LOC./VENUE: T-T-2

TIME: 8:30 AM

Number of workers Participation: 13

TOPIC Discussed: (As per work process)
1. Use face sheild during steel cage
2. welding.
3. Brush your tooth twice a day.
4. Keep your work area clean.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	
1	Shopon Rai		10	Md Rofiq	
2	Sohel Opuzi		11	Dobu Dhar	
3	Suman Rai		12	Rashed Dewg	
4	Afa Miya		13	Jahangir Alam	
5	Md. Saddam		14		
6	Kanak Das		15		
7	Ali Ajgor		16		
8	Shraban Paul		17		
9	Mohamot Ali		18		

Signature of Site Supervisor/ Site Engg. | HSE Officer/Engg. | Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

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CONTROLLED

TRANSRAIL

Toolbox Meeting / Pep Talk

Format No: TRANSRAIL/CONST./HSE/TBM/015
Rev. No: 00
Date: 01.04.2021

NAME OF THE PROJECT: 132 kV D/C Donar to Hatibandha TL — PROJECT CODE: G-479
ADB Package-4, Slope-E
TOOL BOX MEETING DATE: 11.07.25
VENUE: T-3/2
TIME: 7:58 AM
Number of workers Participation: 18
TOPIC Discussed: (As per work process) 1. Always wear all the ppe's before the work.
2. Clean your body everyday.
3. Keep your working area clean.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	[illegible]	[illegible]	10	[illegible]	[illegible]
2	[illegible]	[illegible]	11	[illegible]	[illegible]
3	[illegible]	[illegible]	12	[illegible]	[illegible]
4	[illegible]	[illegible]	13	[illegible]	[illegible]
5	[illegible]	[illegible]	14	[illegible]	[illegible]
6	[illegible]	[illegible]	15	[illegible]	[illegible]
7	[illegible]	[illegible]	16	[illegible]	[illegible]
8	[illegible]	[illegible]	17	[illegible]	[illegible]
9	[illegible]	[illegible]	18	[illegible]	[illegible]

Signature of Site Supervisor/ Engg.

HSE Officer/Engg.

Section/Project I/C Site

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

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CONTROLLED

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132KV AIS Sonargaon to Hatirbandha TL PROJECT CODE: 67-479

TOOL BOX/MEETING DATE: 20.08.25

LOC./VENUE: T-311

TIME: 8:20 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process)
1. Wear all the PPE's before starting to work.
2. Do not forget to fasten safety hook.
3. Pay attention to your surroundings.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1			10		
2			11		
3			12		
4			13		
5			14		
6			15		
7			16		
8			17		
9			18		

Signature of Site Supervisor/ Site Engg.

HSE Officer/Engg.

Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

CONTROLLED

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TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 KV D/C Domar PD - Haldibarihat T/L PROJECT CODE: 61-479

TOOL BOX/MEETING DATE: 21.08.25

LOC./VENUE: T-3V1

TIME: 8:15 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process)
1. Keep working area neat & clean to
2. prevent from falling.
3. Take your time and adjust your pace
4. to the walking surface.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	বিপুল	বিপুল	10	[illegible]	[illegible]
2	[illegible]	[illegible]	11	[illegible]	[illegible]
3	[illegible]	[illegible]	12	[illegible]	[illegible]
4	[illegible]	[illegible]	13	[illegible]	[illegible]
5	[illegible]	[illegible]	14	[illegible]	[illegible]
6	[illegible]	[illegible]	15	[illegible]	[illegible]
7	[illegible]	[illegible]	16	[illegible]	[illegible]
8	[illegible]	Hasan	17	[illegible]	[illegible]
9	[illegible]	[illegible]	18	[illegible]	[illegible]

Signature of Site Supervisor/ Site Engg. **HSE Officer/Engg.** **Section/Project I/C**

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

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CONTROLLED

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 kV D/C Domar to Hati Landing PS PROJECT CODE: G1-479

TOOL BOX/MEETING DATE: 23.09.25

LOC./VENUE: T- 31/1

TIME: 8:42 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process)
1. Always wear all the PPE's during the work.
2. Do not roam beneath the tower without any purpose.
3.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	
1	বিপ্লব	বিপ্লব	10	অনাজত	অনাজত
2	সবুজ	সবুজ	11	আবদুল্লাহ	
3	রাব্বি	রাব্বি	12	বাবিয়া	বাবি
4	রহমান	রহমান	13	নাছিমুল	নাছিম মল
5	আজিজ	আজিজ	14	খালেক	খালেক
6	হুসেন	হুসেন	15	আবির	আবির
7	হাসান	হাসান	16	রিয়াজ	রিয়াজ
8	তোফাজ্জল	তোফাজ্জল	17	মিলন	মিলন
9	আনোয়ার	আনোয়ার	18	ইমন	ইমন

Signature of Site Supervisor/ Site Engg. **HSE Officer/Engg.** **Section/Project I/C**

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

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CONTROLLED

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 KV D/C Domar to Hati Bardhat PROJECT CODE: G-479

TOOL BOX/MEETING DATE: 28.09.25

LOC./VENUE: T-3V2

TIME: 8:09 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process) 1. Do not roam under the tower during
2. The work without purpose.
3. Do not Smoke in the working area.
4.
5. Do not use mobile phone during the work.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature
1	বিপুল	বিপুল	10	রাব্বি	রাব্বি
2	নাজমুল	নাজমুল	11	রনি	রনি
3	অবুজে	অবুজে	12	ইমরান	ইমরান
4	অনুপ	অনুপ	13	আজের	আজের
5	অনন্ত	অনন্ত	14	ছোপান	ছোপান
6	পবন	পবন	15	বিধেন	বিধেন
7	রুমন	রুমন	16	মেহেদী	মেহেদী
8	বাপ্পি	বাপ্পি	17	বিপ্লব	বিপ্লব
9	রাব্বি (2)	রাব্বি	18	বিপ্লব	বিপ্লব

Signature of Site Supervisor/ Engg.

HSE Officer/Engg.

Section/Project I/C Site

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

Page | 1

CONTROLLED

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 KV DC Domar to Hatibandha TL PROJECT CODE: G1-479

TOOL BOX/MEETING DATE: 09.10.25

LOC./VENUE: T-31/1

TIME: 8:10 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process) 1. Safe handling & Storage.
2. Keep working area clean.
3.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	বিপুল	বিপুল	10	অপু (২)	অপু
2	[illegible]	[illegible]	11	[illegible]	[illegible]
3	[illegible]	[illegible]	12	[illegible]	[illegible]
4	[illegible]	[illegible]	13	[illegible]	[illegible]
5	[illegible]	[illegible]	14	[illegible]	[illegible]
6	[illegible]	[illegible]	15	[illegible]	[illegible]
7	[illegible]	[illegible]	16	[illegible]	[illegible]
8	[illegible]	[illegible]	17	[illegible]	[illegible]
9	[illegible]	[illegible]	18	[illegible]	[illegible]

Signature of Site Supervisor/ Engg.

HSE Officer/Engg.

Section/Project I/C Site

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

CONTROLLED

Page | 1

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: 132 KV D/C Domar to Hati Tandha T/L PROJECT CODE: G-479

TOOL BOX/MEETING DATE: 18.10.25

LOC./VENUE: T-31/1

TIME: 8:01 AM

Number of workers Participation: 18

TOPIC Discussed: (As per work process)
1. Do not throw waste here and there.
2. Keep your working area clean.
3. Do not smoke during the work.
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	বিপুল	বিপুল	10	বাবিদ	বাবিদ
2	অমৃত	অমৃত	11	অমিত	অমিত
3	অনিক্ষ (৩)	অনিক্ষ	12	ফারুক	ফারুক
4	অনিক্ষ(২)	অনিক্ষ	13	গোপাল	গোপাল
5	আব্দুল	আব্দুল	14	গোপাল(২)	গোপাল
6	আব্দুল(২)	আব্দুল	15	অমিত	অমিত
7	আব্দুর	আব্দুর	16	ইমন	ইমন
8	বিপাশা	বিপাশা	17	তিয়াস	তিয়াস
9	রতন	রতন	18	মধুসূদন	মধুসূদন

Signature of Site Supervisor/ Engg.

HSE Officer/Engg.

Section/Project I/C Site

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

CONTROLLED

Page | 1

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: ADB Bangladesh PROJECT CODE: G-479

TOOL BOX/MEETING DATE: 20.11.25

LOC./VENUE: 32/D

TIME: 8:00Am

Number of workers Participation: 12

TOPIC Discussed: (As per work process) 1. Cheek Jinpole condition
2. Cheek Pully condition
3. Cheek wire Rope condition
4.
5.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	Md. Tiplob		10	Md. Kalam	
2	Md. Jibon		11	Md. Shuvo	
3	Md. Rony		12	Md. Jaidul	
4	Md. Soju		13		
5	Md. Milon		14		
6	Md. Kamrul		15		
7	Md. Majedul		16		
8	Md. Anamul		17		
9	Md. Monirul		18		

Signature of Site Supervisor/ Site Engg.

HSE Officer/Engg.

Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting.the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

Page | 1

CONTROLLED

CamScanner

TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021

NAME OF THE PROJECT: ADB Bangladesh PROJECT CODE: 61-479

TOOL BOX/MEETING DATE: 22/11/25

LOC./VENUE: 32/0

TIME: 8:30 Am

Number of workers Participation: 12

TOPIC Discussed: (As per work process) 1. use fall. Arrester when climbing
2. on tower.
3.
4. use PPE befor Start work
5. use Safety belt when climbing on tower.

Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	Md. Tiplob		10	Md. Kalam	
2	Md. Jibon		11	Md. Shuvo	
3	Md. Rony		12	Md. Jadul	
4	Md. Soju		13		
5	Md. Milon		14		
6	Md. Kamrul		15		
7	Md. Majedul		16		
8	Md. Anamul		17		
9	Md. Monirul		18		

Signature of Site Supervisor/ Site Engg.

Kishore Kumar Mahanta, Asst. Manager (HSE), Transrail Lighting ltd.
HSE Officer/Engg.

Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

Page | 1

CONTROLLED

CamScanner

Package 5

project name: Dhaka and western zone Transmission Grid expansion project (package - 05)

Date: - 21/07/2025

Time: 8:00 AM

SL	Worker Name	SL	Worker Name
01	md. Gazi	25	Hasan
02	Pasan	26	Sakib
03	Alim	27	Tamim
04	Nur	28	Mashiur
05	Ali	29	Nayon
06	Mofiz	30	AL Imran
07	Alam	31	Kutub
08	Rabbi	32	Fattul Mia
09	Rasel	33	Asif
10	Momin	34	Robin
11	Nur Alam	35	Azimin
12	Kutum	36	farid
13	Hasan	37	Nayon
14	Nayon	38	Nur.
15	Asif	39	KASAM
16	Belal	40	HANNAN
17	Nasid	41	SUFIAN
18	Kanaur	42	MOTIOR
19	Kanol	43	Aalal
20	Asim	44	kader
21	Adnan	45	Alim
22	Ripon	46	Rocky
23	Rabbi	47	Kamal
24	Alam	48	

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SL	worker name	SL	worker name
49	Rifat		
50	Hannan		
51	Kanon		
52	Nabil		
53	Nipon		
54	Pasel		
55	Mamun		
56	Rectul		
57	Telab		
58	Rabbi		
59	Nesat		
60	Sadek		
61	Robiul		
62	Hamim		
63	Rafik		
64	Rustom		
65	Hasem		
66	Hafiz		
67	Leden		
68	Kutub		
69	Nabil		
70	Revan		

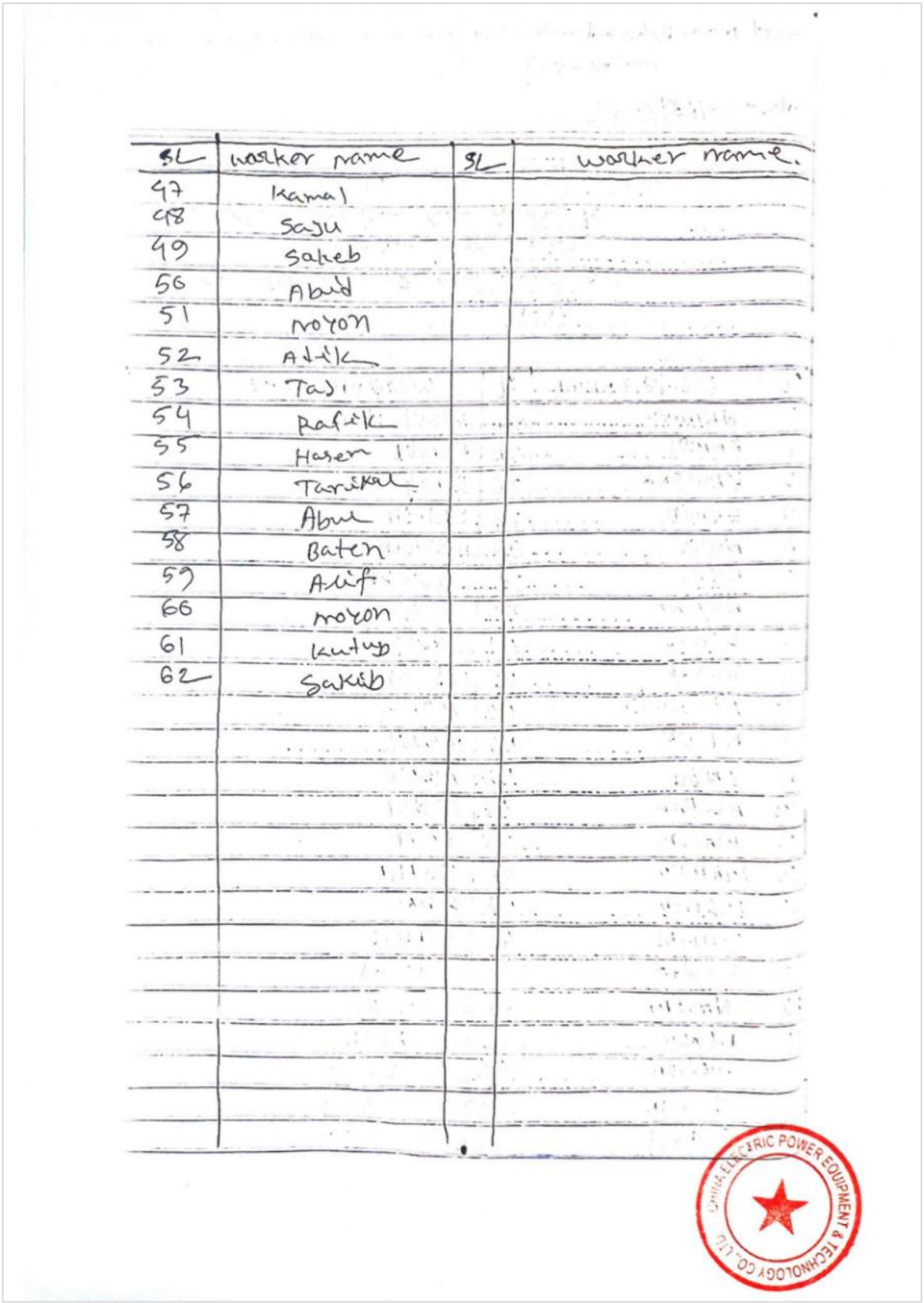
Project name: Dhaka and western zone Transmission Grid Expansion project
(Package-05)

Date:- 22/10/2015

Time: 7:50 AM

SL	Worker NAME	SL	Worker name
1	HANNAN	24	ABDUL Alim
2	KAMAL	25	motalib
3	KAWSAR	26	sohag
4	HAMID	27	Shuman
5	AWAL	28	moshiur
6	Alim	29	Showkab
7	ARMAN	30	polash
8	GOBUJ	31	SADIQUL
9	JAHID	32	Delower
40	AL- AMIN	33	mahidi
11	ATOUR	34	mehidi
12	ZAHI	35	mahid
13	AWLAD	36	Solal
14	MASUM	37	Shirll
15	MAMUN	38	TOWFIQE
16	motion	39	SADDAM
17	ZAMAL	40	SOFIQUL
18	JOHIR	41	Rakib
19	HASEM	42	NOYON
20	NOBON	43	Atik
21	motion	44	Rakib
22	Shuman	45	Alaj
23	SOBIKUL	46	Kader

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SL	worker name	SL	worker name.
47	Kamal		
48	Saju		
49	Sakeb		
50	Abid		
51	Noyon		
52	Adik		
53	Taj		
54	Rafik		
55	Hasen		
56	Tarikul		
57	Abul		
58	Baten		
59	Arif		
60	noyon		
61	kutub		
62	Sakib		

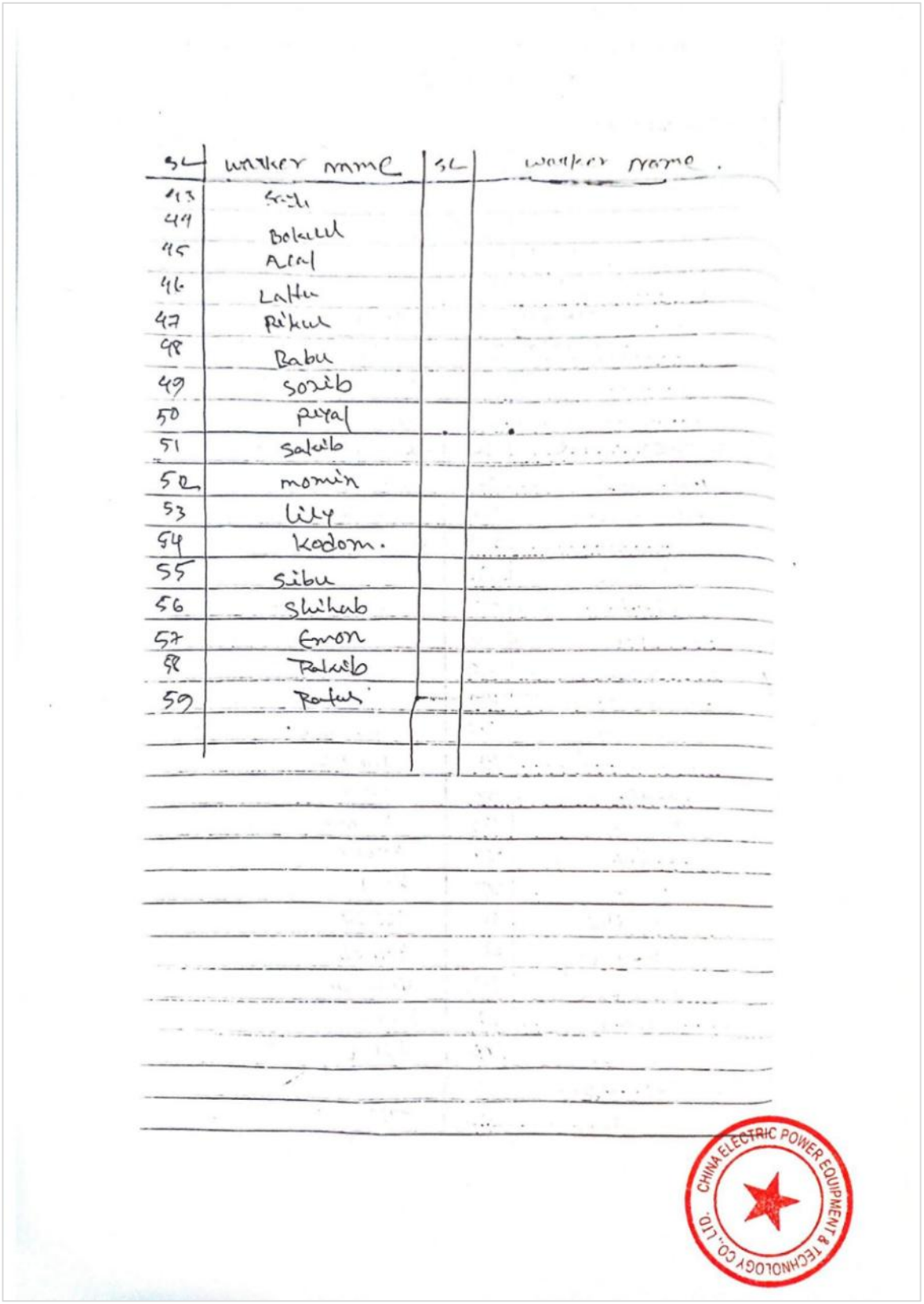
Package 6

SL	worker name	SL	worker name
1	HABID	24	GAZI
2	HANNAN	25	FORHAD
3	ALIM	26	SHAHIN
4	ATOUR	27	RAZZAK
5	ASHRAF	28	FAHIM
6	AMIR	29	TOWFIK
7	RAHIM	30	RAJIB
8	ATIQUL	31	RABBY
9	AZHAR	32	RAFI
10	MASUM	33	SAMSUR
11	MOTIOUR	34	JAHID
12	MAMUN	35	MAHID
13	MINHAJ	36	ABU BAKKAR
14	SALIM	37	Alem
15	SALMAN	38	noyon
16	SAZU	39	Salon
17	SADIQUL	40	Ikutub.
18	AMIN	41	Alel
19	RAZZK.	42	Habibor
20	RAFI	43	Sajem
21	SAHINUR	44	Santo
22	SAMSUR	45	Habib
23	RASEL	46	Lal Bey

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

SL	worker name	SL	worker name.
01	md. Gazi	22	shihab
02	md. kanon	23	Rabbi
03	Rakib	24	monin
04	Nusrat	25	mamun
05	Farid	26	Robiul
06	Alam	27	sobuj
07	royon	28	Ridoy
08	mohosin	29	Amit
09	kutub	30	rozzul
10	Abul	31	NAJMUL
11	Ridoy	32	HASAN
12	meraj	33	KASAM
13	saiful	34	RABBY
14	minhaj	35	RAFI
15	Ashik	36	SOBUJ
16	Rayazul	37	HAMID
17	Arafin	38	RAHMAN
18	Rakib	39	KAMAL
19	mahmud	40	HADUL
20	Shamit	41	pipal
21	Rafan	42	Tareq

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.



SL	worker name	SL	worker name
43	Sujit		
44	Bakul		
45	Alal		
46	Lalu		
47	Rikul		
48	Babu		
49	Sozib		
50	Piyal		
51	Salab		
52	momin		
53	Lily		
54	Kadom.		
55	Sibu		
56	Shihab		
57	Emon		
58	Rakib		
59	Rafiq		

SL	worker name	SL	worker name
01	md. Gazi	22	Shihab
02	md. Kanon	23	Rakhi
03	Rakib	24	monin
04	Nusrat	25	manun
05	Farid	26	Robiul
06	Alam	27	sobuj
07	royon	28	Ridoy
08	mohosin	29	Amit
09	Kutub	30	rozrul
10	Abul	31	RAJMUL
11	Ridoy	32	HASAN
12	meraj	33	KASAM
13	Saiful	34	RABBY
14	minhaj	35	RAFI
15	Ashik	36	SOBUJ
16	Rayazul	37	HAMID
17	Arafin	38	RAHMAN
18	Rakib	39	KAMAL
19	mahun	40	HADUL
20	Shamit	41	pipal
21	Rafan	42	Tareq

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Hanbaek Co., Ltd P.O. Box 62241
23, Bia-ro, Gwangsan-gu, Gwangju -si, KOREA
PH: 82-62-954-1122, FAX: 82-62-953-2117, E-mail:global@hanback.co

TOOL BOX MEETING ATTENDANCE SHEET

Project Name: Design, Supply, Installation, Testing & Commissioning of 400kv and 230kv TL
Location: Kaliganj, Gazipur.
Date: 13.11.2025 **Time:** 9:30 AM

No.	Name of Worker	Designation	Signature
1	Md. Rubel Sheak	Site Engineer	
2	Md. Omor Faruk	Supervisor	Omor Faruk
3	Sazzad Molla	Lineman	Sazzad Molla
4	Iman Huseen	"	Iman
5	Soyon Molla	"	Soyon
6	Baizid Sheikh	"	Baizid
7	Shinajul Islam	"	
8	Fazkal Hossen	"	Fazul
9	Sagor Molla	"	
10	Sohoto Sarder	"	

Supervisor / Safety Officer Name: Mohosin 01310227501

Signature: _____ **Date:** 13.11.2025

HANBAEK CO., LTD. hanbaek KOREA

Branch Office: Gulshan Villa, Flat # 6B, House # 3/C, Road # 23/C, Gulshan-1, Dhaka – 1212, Bangladesh.
PH: 8802-2222-90514, 8802-2222-94293

Annexure-32: Environmental Monitoring Pictures

Air Quality

Package 1



AQ1 Near T-1/0



AQ2 Near T-4/0



AQ3 Near T-3/0



AQ4 Near T-2/3



AQ5 Near T-2/1

Package 2



AQ6- In front of Eye Hospital, near the Substation Area in Bashundhara Residential Area



AQ7 – Mosque, Near United International University (UIU)



AQ8- Near the Substation Area of Aftab Nagar

Package 3



AQ9 Kudir Bottola, Khulna



AQ10 Vadgati, Batiaghata, Khulna



AQ11 Bagdari Bazar, Dumuria, Khulna



AQ12 Chorgram, Tala, Satkhira



AQ13 Magura, Satkhira



AQ14 Protappur, Keshobpur, Jashore



AQ15 Aminpur, Keshobpur, Jashore



AQ16 Battail, Boro Pukur Par, Kushtia



AQ17 Malihad, Mirpur, Kushtia



AQ18 Baghdanga, Kushtia Sadar, Kushtia



AQ19 Gopalnagar, Gangni, Meherpur



AQ20 Natun Modondanga, Shampur, Meherpur

Package 4



AQ21 T-2/0



AQ22 T-4/0



AQ23 T-5/0



AQ24 T-15/0



AQ37 T-17/0



AQ36 TT-2



AQ31 T-3/0

Package 5

	
AQ46 In front of Hafej Sheikh's House	AQ47 Located Near Nolir Bridge
	
AQ48 In front of Mamun Mia's House	AQ49 In front of Late Abdul Razzak's House

Package 6

	
AQ50 In front of Dulal Mia's house	AQ51 In front of Dipak Chakraborty' s Shop

	
AQ52 In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	AQ53 In front of Mohadev Karmakar's house

Package 7

	
AQ54 Near 132/33 kV GIS substation at Phultola	AQ55 Near 230/132/33 kV GIS substation at Rupsha
	
AQ56 Near 132/33 kV GIS substation at Maheshpur	AQ57 Near 132/33 kV GIS substation at Meherpur



AQ58 Near 132/33 kV GIS substation at Manirampur

Noise Level Monitoring

Package 1



NL1 Near TT-1/0



NL2 Near T-4/0



NL3 Near T-3/0



NL4 Near T-2/3



NL5 Near T-2/1

Package 2



NL-6 Near the Substation Area in Bashundhara Residential area



NL-7 Near United International University (UIU) Mosque



NL-8 Near the Substation Area of Aftabnagar



NL-9 Near United International University (UIU)



NL-10 Near Base Camp Area



NL-11 Near Aftabnagar



NL-12 Near Hospital in Aftabnagar

Package 3



NL13 Kudir Bottola, Khulna



NL14 Vadgati, Batiaghata, Khulna



NL15 Bagdari Bazar, Dumuria, Khulna



NL16 Chorgram, Tala, Satkhira



NL17 Magura, Satkhira



NL18 Protappur, Keshobpur, Jashore



NL19 Aminpur, Keshobpur, Jashore

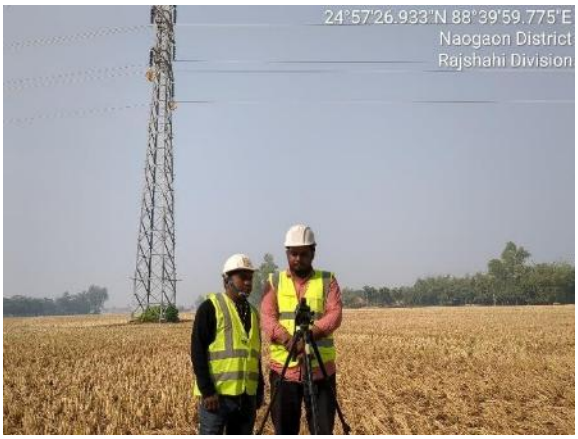


NL20 Bottail, Boro Pukur Par, Kushtia

	
NL21 Malihad, Mirpur, Kushtia	NL22 Baghdanga, Kushtia Sadar, Kushtia
	
NL23 Gopal Nagar, Gangni, Meherpur	NL24 Natun Modondanga, Shampur, Meherpur

Package 4

	
NL25 T-2/0 of Bagerhat-Pirojpur-Bhandaria TL	NL30 T-1/0 of Purba Sadipur- Domar TL



NL35 T-3/0 of Niamatpur- Patnitola TL



NL45 T-4/0 of Domar-Hatibandha



NL40 TT-2 of Gopalganj-Shibchar TL



NL36 T-9/0 of Niamatpur- Patnitola TL



NL46 T-10/0 of Domar-Hatibandha

Package 5

	
NL 50, In front of Hafej Sheikh's House	NL 51, Beside Kaliganj- Kapasia Rd. located near Nolir Bridge
	
NL 52, In front of Mamun Mia's House	NL 53, In front of Late Abdul Razzak's House

Package 6

	
NL 54 In front of Dulal Mia's house	NL 55 In front of Dipak Chakraborty' s Shop

	
NL 56 In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	NL 57 In front of Mohadev Karmakar's house

Package 7

	
NL 58 Near 132/33 kV GIS substation at Phultola	NL 59 Near 230/132/33 kV GIS substation at Rupsha
	
NL 60 Near 132/33 kV GIS substation at Maheshpur	NL 61 Near 132/33 kV GIS substation at Meherpur



NL 62 Near 132/33 kV GIS substation at Manirampur

Surface Water Sampling

Package 1



SW1 Near T-1/0



SW2 Near T-4/0



SW3 Near T-3/0



SW4 Near T-2/3



SW5 Near T-2/1

Package 2



SW-6- Lake side, Near Bashundhara L Block



SW-7- Canal, Near United International University



SW-8- Canal, Near Aftabnagar Steel Bridge

Package 3



SW9 Kudir Bottola, Khulna



SW10 Vadgati, Batiaghata, Khulna



SW11 Bagdari Bazar, Dumuria, Khulna



SW12 Chorgram, Tala, Satkhira



SW13 Magura, Satkhira



SW14 Protappur, Keshobpur, Jashore



SW15 Aminpur, Keshobpur, Jashore



SW16 Bottail, Boro Pukur Par, Kushtia

	
SW17 Malihad, Mirpur, Kushtia	SW18 Baghdanga, Kushtia Sadar, Kushtia
	
SW19 Gopal Nagar, Gangni, Meherpur	SW20 Natun Modondanga, Shampur, Meherpur

Package 4

	
SW21 Near T-2/4	SW22 AP-12

Package 5

	
SW 26 Nolir Khal	SW 27 Nolir Khal
	
SW 28 Nolir Khal	SW 29 Nolir Khal

Package 6

	
SW 30 Khal Beside Dulal, Mia's	SW 31 Tongi Khal

	
SW 32 Tongi Khal	SW 33 Tongi Khal

Package 7

	
SW-34 Near 132/33 kV GIS substation at Phultola	SW-35 Near 230/132/33 kV GIS substation at Rupsha
	
SW-36 Near 132/33 kV GIS substation at Maheshpur	SW-37 Near 132/33 kV GIS substation at Meherpur



SW-38 Near 132/33 kV GIS substation at Manirampur

Ground Water

Package 1



GW1 Near T-1/0



GW2 Near T-4/0



GW3 Near T-3/0



GW4 Near T-2/3



GW5 Near T-2/1

Package 2



GW-6- Groundwater, Eye Hospital, Near the Substation Area in Bashundhara Residential Area



GW-7- Groundwater, Mosque, Near United International University



GW-8- Groundwater, Mosque, Near the Substation Area of Aftabnagar

Package 3



GW9 Kudir Bottola, Khulna



GW10 Vadgati, Batiaghata, Khulna



GW11 Bagdari Bazar, Dumuria, Khulna



GW12 Chorgram, Tala, Satkhira



GW13 Magura, Satkhira



GW14 Protappur, Keshobpur, Jashore



GW15 Aminpur, Keshobpur, Jashore



GW16 Bottail, Boro Pukur Par, Kushtia



GW17 Malihad, Mirpur, Kushtia



GW18 Baghdanga, Kushtia Sadar, Kushtia



GW19 Gopal Nagar, Gangni, Meherpur



GW20 Natun Modondanga, Shampur, Meherpur

Package 4



GW21 T-2/4



GW24 Near AP-01



GW22 AP-12

Package 5



GW 26 Hafej Sheikh's House near Nolir Bridge



GW 27 Beside Kaliganj- Kapasia Rd. located

	
GW 28 Mamun Mia's House	GW 29 Late Abdul Razzak's House

Package 6

	
GW 30 Beside Dulal Mia's Shop	GW 31 Beside Dipak Chakraborty' s Shop
	
GW 32 Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	GW 33 Beside Mohadev Karmakar's house

Package 7



GW 34 Near 132/33 kV GIS substation at Phultola



GW 35 Near 230/132/33 kV GIS substation at Rupsh



GW 36 Near 132/33 kV GIS substation at Maheshpur



GW 37 Near 132/33 kV GIS substation at Meherpur



GW 38 Near 132/33 kV GIS substation at Manirampur

Soil Sampling

Package 1



SQ1 Near T-1/0



SQ2 Near T-4/0



SQ3 Near T-3/0



SQ4 Near T-2/3



SQ5 Near T-2/1

Package 2



SQ6 Hospital, Near the Substation Area in Bashundhara Residential Area



SQ7 Mosque, Near United International University



SQ8 Mosque, Near the Substation Area

Package 3



SQ9 Kudir Bottola, Khulna



SQ10 Vadgati, Batiaghata, Khulna



SQ11 Bagdari Bazar, Dumuria, Khulna



SQ12 Chorgram, Tala, Satkhira



SQ13 Magura, Satkhira



SQ14 Protappur, Keshobpur, Jashore



SQ15 Aminpur, Keshobpur, Jashore



SQ16 Bottail, Boro Pukur Par, Kushtia

	
SQ17 Malihad, Mirpur, Kushtia	SQ18 Baghdanga, Kushtia Sadar, Kushtia
	
SQ19 Gopal Nagar, Gangni, Meherpur	SQ20 Natun Modondanga, Shampur, Meherpur

Package 4

	
SQ22 T-8/0	SQ24 Near Ap 08



SQ21 T-5/0

Package 5



SQ 26 Hafej Sheikh's House



SQ 27 Beside Kaliganj- Kapasia Rd. located near Nolir Bridge



SQ 28 Beside the Bridge of Mohani Fuldi Road



SQ 29 Beside the Late Abdul Razzak's House

Package 6

	
SQ 30 In front of Dulal Mia's house	SQ 31 In front of Dipak Chakraborty's Shop
	
SQ 32 Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	SQ 33 Beside Mohadev Karmakar's house

Package 7

	
SQ 34 Near 132/33 kV GIS substation at Phultola	SQ 35 Near 230/132/33 kV GIS substation at Rupsha



SQ 36 Near 132/33 kV GIS substation at Maheshpur



SQ 37 Near 132/33 kV GIS substation at Meherpur



SQ 38 Near 132/33 kV GIS substation at Manirampur

Annexure-33: Environmental Monitoring Lab Sheet

Package 1

Environmental Quality Monitoring Report

Annex 1: Air Quality Analysis

EnviroCare International Ltd.
A house of Inspection, Testing, Assessment & Consultancy

Ref: ECIL/2026/10-01/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1)***
Description of Sample	: Ambient Air Quality Monitoring (AAQM)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 20.12.2025-21.12.2025
Date of Analysis	: 05.01.2026
Reporting Date	: 05.01.2026

SN	Monitoring Locations	Concentration of different parameters in ambient air							
		SO_x	NO_x	O_3	CO	$PM_{2.5}$	PM_{10}	SPM	CO_2
1	AAQM-1 (Substation, kaliganj, Gazipur) 23.967062N; 90.549873E	9.85	13.95	3.48	1.05	24.78	37.34	74.81	289.10
2	AAQM-2 (T 4/1, kaliganj, Gazipur) 23.961542N; 90.554966E	5.96	9.66	3.49	1.15	11.79	21.52	40.45	239.78
3	AAQM-3 (T 2/3, kaliganj, Gazipur) 23.947302N; 90.557246E	6.73	9.65	2.81	1.09	12.47	23.83	47.19	254.49
4	AAQM-4 (AP 2/0, kaliganj, Gazipur) 23.936901N; 90.559124E	7.35	11.53	3.57	1.13	13.83	20.52	41.64	263.86
5	AAQM-5 (AP 3/0, kaliganj, Gazipur) 23.953659N; 90.555345E	14.75	17.05	2.81	1.30	18.37	29.77	66.16	280.07
Unit		µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	mg/m³
Monitoring Duration as per APCR'2022		24	24	8	8	24	24	24	8
Monitoring Principle		***Light scattering technique***			***High precision Electrochemical sensor***				
Bangladesh Standard		**80**	**80**	**100**	**5**	**65**	**150**	**NYS**	**NYS**
IFC EHS Guidelines' 30 April 2007		**20**	**200/ 1 hr**	**100**	**NYS**	**25**	**50**	**NYS**	**NYS**

***Standard**: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 .
***Note**: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** Machine; NYS=Not Yet set

Prepared By	***Reviewed By***	***Approved By***
Md. Sohanur B.Sc. in Environmental Science (KU) Consultant (Environment)	Sanjoy Kumar Mondol B.Sc. in ESRM (MBSTU) MS in Environmental Science (MBSTU) Technical Manager	Shorov Roy B.Sc. in ESRM (MBSTU) MS in Environmental Science (BAU) Quality Manager

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1

Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1) Page | 46

Annex 2: Noise Quality Analysis

EnviroCare International Ltd.
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Ref: ECIL/2026/09-01/ANLM

Test Results of Noise Level Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1)***
Description of Sample	: Noise Level (NL)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 20.12.2025-21.12.2025
Date of Analysis	: 05.01.2026
Reporting Date	: 05.01.2026

Test Results

Location	Concentration Present (dBA)						Category
	Day			Night			
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
NL-1, Sub-Station, Kaliganj, Gazipur 23.966980N; 90.549873E	55.44	73.56	35.16	46.27	68.9	33.1	Mixed Zone
NL-2, P 4/1, Kaliganj, Gazipur 23.961558N; 90.554945E	49.47	69.37	32.77	39.40	57.4	32.2	Silent Zone
NL-3, T 2/3, Kaliganj, Gazipur 23.947304N; 90.557165E	48.96	67.06	32.26	39.38	57.4	31.1	Silent Zone
NL-4, AP 2/0, Kaliganj, Gazipur 23.936917N; 90.559105E	46.72	70.84	31.14	38.57	56.9	30.9	Mixed Zone
NL-5, AP 3/0, Kaliganj, Gazipur 23.953604N; 90.555474E	54.57	71.08	32.38	44.89	67.8	31.4	Residential Zone

Bangladesh Standard	**Day Time**	**Night Time**
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential; Intuitional; Educational	55	45

* Noise Pollution Control Rules 2006, Schedule 1 (Zone Based Noise Level Standard): *ECIL* Laboratory, January, 2026

*Exceeds the Standard

Prepared By	***Reviewed By***	***Approved By***
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Annex 3: Groundwater Lab Test Report

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Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1).
Description of sample	: Groundwater
Location	: Kaliganj, Gazipur
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 20-21 December, 2025

LABORATORY TEST RESULTS

Sl. No	Parameters	Unit	Analysis Method	Concentration					*Bangladesh Standard ECR 2023, Schedule-2 (A)
				GW1	GW2	GW3	GW4	GW5	
1	Ammonia (NH3)	mg/L	UVS	0.3	0.5	0.2	0.6	0.4	1.50
2	Arsenic	mg/L	AAS	0.02	0.04	0.03	0.03	0.02	0.05
3	Biochemical Oxygen Demand (BOD)	mg/L	5 days Incubation	0.8	1.2	0.6	1.5	1.0	NYS
4	Chemical oxygen Demand (COD)	mg/L	CRM	6	9	5	12	8	NYS
5	Chloride	mg/L	Titrimetric	120	140	110	150	130	250
6	Coliform (Faecal)	CFU/100ml	MFM	0	0	0	0	0	0
7	Coliform (Total)	CFU/100ml	MFM	0	0	0	0	0	0
8	Iron (Fe)	mg/L	AAS	0.7	0.9	0.5	0.5	0.3	0.3-1.0

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
12.01.2026	12.01.2026	12.01.2026

Environmental Quality Monitoring Report

BANGLADESH ENVIRONMENTAL ENGINEERING
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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1).
Description of sample	: Groundwater
Location	: Kaliganj, Gazipur
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 20-21 December, 2025

LABORATORY TEST RESULTS

Sl. No	Parameters	Unit	Analysis Method	Concentration					*Bangladesh Standard ECR 2023, Schedule-2 (A)
				GW1	GW2	GW3	GW4	GW5	
9	Manganese (Mn)	mg/L	AAS	0.18	0.25	0.30	0.22	0.27	0.4
10	pH	-	pH Meter	7.2	7.1	6.9	7.3	7.2	6.5-8.5
11	Phosphate	mg/L	UVS	0.3	0.5	0.2	0.6	0.4	NYS
12	Salinity	ppt	Multimeter	0.12	0.045	0.15	0.08	0.10	NYS
13	Turbidity	NTU	Turbidity Meter	2.1	3.0	2.8	2.5	3.3	5
14	Electrical Conductivity (EC)	mS/cm	Multimeter	234	182	215	178	218	NYS
15	Hardness	mg/L	Titrimetric	12	14	17	11	13	500
16	Temperature	°C	Thermometer	24	26	23	26	23	20-30
17	Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.04	0.07	0.03	0.09	0.06	NYS

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
12.01.2026	12.01.2026	12.01.2026

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1).
Description of sample	: Surface Water
Location	: Kaliganj,Gazipur
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 20-21 December, 2025

LABORATORY TEST RESULTS

Sl No	Parameters	Analysis Method	Unit	Concentration *Bangladesh Standard ECR 2023, Schedule-2 (A)					*Bangladesh Standard ECR 2023, Schedule-2 (A)
				SW1	SW2	SW3	SW4	SW5	f
08	Ammonia (NH3)	mg/L	UVS	1.8	2.4	2.0	3.6	2.9	NYS
09	Biochemical Oxygen Demand (BOD)	mg/L	5 days Incubation	8.5	11.2	9.4	18.6	14.3	≤12
10	Chemical oxygen Demand (COD)	mg/L	CRM	38	52	44	96	71	100
11	Dissolved Oxygen	mg/L	Multimeter	5.6	4.8	5.2	3.1	4.0	NYS
12	Total Dissolved Solids (TDS)	mg/L	Multimeter	420	510	460	680	590	NYS
13	Total Suspended Solid (TSS)	mg/L	Gravimetric	120	190	150	410	260	1000
14	Oil & Grease	mg/L	5520.B	1.2	2.8	3.1	2.4	1.7	NYS
15	Total Nitrogen	mg/L	UVS	2.9	4.1	3.4	6.8	5.2	NYS

***NOTE**: ECR =Environmental Conservation Rules, UVS=UV-Visible Spectrophotometer, CRM=Closed Reflex Methods, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
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Annex 5: Soil Quality Lab Test Repot

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1).
Description of sample	: Soil Chemistry
Location	: Kaliganj, Gazipur
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 20-21 December, 2025

LABORATORY TEST RESULTS

SN	Parameters	Unit	Concentration					Dutch Standard
			SC-1	SC-2	SC-3	SC-4	SC-5	
1	Calcium (Ca)	mg/kg	820	760	910	880	840	NYS
2	Copper (Cu)	mg/kg	0.06	0.08	0.07	0.09	0.08	36
3	EC	dS/m	0.32	0.41	0.29	0.48	0.37	NYS
4	Iron	mg/kg	3,200	3,100	3,800	3,300	3,500	NYS
5	pH	–	6.4	6.8	6.6	7.1	6.7	NYS
6	Cadmium (Cd)	mg/kg	0.18	0.22	0.20	0.28	0.24	0.8
7	Chromium (Cr)	mg/kg	24	35	32	29	31	100

***NOTE**: mg/Kg= milligram per kilogram, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
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12.01.2026	12.01.2026	12.01.2026

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400 kV and 230kV Transmission Lines' LILO at Kaliganj and Purbachal Substation on Turnkey Basis (Package-1).
Description of sample	: Soil Chemistry
Location	: Kaliganj, Gazipur
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 20-21 December, 2025

LABORATORY TEST RESULTS

SN	Parameters	Unit	Concentration					Dutch Standard
			SC-1	SC-2	SC-3	SC-4	SC-5	
8	Phosphorus (P)	mg/kg	18	26	22	39	31	NYS
9	Potassium (K)	mg/kg	78	94	86	122	105	NYS
10	Total Nitrogen	mg/kg	540	510	560	590	575	NYS
11	Lead (Pb)	mg/kg	18	11	15	9	12	85
12	Zinc (Zn)	mg/kg	0.09	0.11	0.10	0.14	0.12	140
13	Organic Content (OC)	%	1.21	1.35	1.28	1.62	1.47	NYS

***NOTE**: mg/Kg= milligram per kilogram, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
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12.01.2026	12.01.2026	12.01.2026

Package 2

Annex 1: Air Quality Analysis

EnviroCare International Ltd.
A house of Inspection, Testing, Assessment &Consultancy

Ref: ECIL/2025/083/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Air Quality Monitoring (AAQM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM_{10}	$PM_{2.5}$	Pb	SO_2	NO_x	O_3	CO
1	**AAQM-1**-Near the Substation Area in Bashundhara Residential Area GPS: **23.81644N 90.43622E**	99.26	43.51	23.17	BDL	12.09	17.36	7.89	0.58
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3
Duration		8	24	24	24	24	24	8	8
Method of Analysis		Light Scattering Nephotometer			AAS	High Sensitivity Electrochemical			
Bangladesh Standard		200	150	65	0.5	80	80	100	5

*Standard: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** & Air Sampler with Attachment (**Single Head**)

***Note**: BDL = Bellow the detection level, AAS=Atomic Absorption Spectroscopy

Serial No.	Temperature	Humidity	Wind Speed
01	33.2 degreeCelcius	75.25%	1.8 m/s

Source: On site Recording by Anemometer

Dhaka

Prepared By	Reviewed By	Approved By
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EnviroCare International Ltd.
A house of Inspection, Testing, Assessment &Consultancy

Ref: ECIL/2025/084/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Air Quality Monitoring (AAQM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM_{10}	$PM_{2.5}$	Pb	SO_2	NO_X	O_3	CO
2	**AAQM-2**-Near United International University (UIU) Mosque GPS: **23.79979N 90.44887E**	82.63	38.57	19.41	BDL	13.55	25.19	9.08	0.76
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3
Duration		8	24	24	24	24	24	8	8
Method of Analysis		Light Scattering Nephotometer			AAS	High Sensitivity Electrochemical			
Bangladesh Standard		**200**	**150**	**65**	**0.5**	**80**	**80**	**100**	**5**

*Standard: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** & Air Sampler with Attachment (**Single Head**)

***Note**: BDL = Bellow the detection level, AAS=Atomic Absorption Spectroscopy

Serial No.	Temperature	Humidity	Wind Speed
01	34.5 degreeCelcius	72.35%	1.9 m/s

Source: On site Recording by Anemometer

EnviroCare International Ltd. Dhaka

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EnviroCare International Ltd.
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Ref: ECIL/2025/085/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Air Quality Monitoring (AAQM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 11.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM_{10}	$PM_{2.5}$	Pb	SO_2	NO_2	O_3	CO
3	**AAQM-3**- Near the Substation Area of Aftabnagar GPS: **23.76667N 90.43124E**	48.71	28.46	13.83	BDL	12.35	19.89	7.64	0.43
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3
Duration		8	24	24	24	24	24	8	8
Method of Analysis		Light Scattering Nephotometer			AAS	High Sensitivity Electrochemical			
Bangladesh Standard		**200**	**150**	**65**	**0.5**	**80**	**80**	**100**	**5**

*Standard: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005; vide S.R.O. NO. 220-Law/2005.

Note: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** & Air Sampler with Attachment (**Single Head**)

***Note**: BDL = Bellow the detection level, AAS=Atomic Absorption Spectroscopy

Serial No.	Temperature	Humidity	Wind Speed
01	31.9 degreeCelcius	71.29%	1.8 m/s

Source: On site Recording by Anemometer

Dhaka

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Annex 2: Noise Quality Analysis

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Ref: ECIL/2025/11/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
1	Near the Substation Area in Bashundhara Residential Area **23.81641N 90.43627E**	ANLM-1

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-1 Near the Substation Area in Bashundhara Residential Area	57.91	83.2	40.3	41.18	75.9	33.8	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Ref: ECIL/2025/12/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
2	Near United International University (UIU) Mosque **23.79982N 90.44888E**	ANLM-2

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-2 Near United International University (UIU) Mosque	48.31	80.5	34.7	39.14	58.9	32.7	Silent	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Ref: ECIL/2025/13/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
3	Near the Substation Area of Aftabnagar 23.76669N 90.43129E	ANLM-3

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-3 Near the Substation Area of Aftabnagar	55.62	86.1	36.8	42.18	67.5	34.3	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Ref: ECIL/2025/14/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
4	Near United International University (UIU) **23.79822N 90.44926E**	ANLM-4

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-4 Near United International University (UIU)	58.79	85.6	41.3	46.58	74.5	32.9	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

Dhaka

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Ref: ECIL/2025/15/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
5	Near Base Camp Area **23.76816N 90.44922E**	ANLM-5

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-5 Near Base Camp Area	53.96	77.1	36.5	44.19	69.2	33.8	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Ref: ECIL/2025/16/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
6	Near Mosque in Aftabnagar **23.76496N 90.44791E**	ANLM-6

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-6 Near Mosque in Aftabnagar	59.21	78.9	38.2	42.88	62.6	33.9	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Ref: ECIL/2025/17/ANLM

Test Results of Noise Level Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample	: Ambient Noise Level Monitoring (ANLM)
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 10.08.2025
Date of Analysis	: 12.08.2025-17.08.2025
Reporting Date	: 18.08.2025

Sampling Location

Sl. No	Sample Locations	Sampling ID
7	Near Hospital in Aftabnagar **23.76577N 90.43756E**	ANLM-7

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}		
ANLM-7 Near Hospital in Aftabnagar	48.95	69.7	33.8	37.65	61.3	33.7	Silent	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45

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Annex 3: Surface Water Quality Analysis

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Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Surface Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)
Name of the Contractor	: TBEA CO., LTD
Description of sample	: Surface Water
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 10.08.2025

LABORATORY TEST RESULTS

SN	Parameters	Unit	Analysis Method	Concentration			Bangladesh Standard ECR ' 2023
				SW-1	SW-2	SW-3	
1	Ammonia	mg/L	UVS	0.21	0.18	0.19	0.3
2	Biochemical Oxygen Demand (BOD)	mg/L	5 days Incubation	17	14	13	≤6
3	Chemical Oxygen Demand (COD)	mg/L	CRM	56	67	74	50
4	Coliform (Total)	CFU/100 ml	MFM	116	107	101	≤5000
5	Dissolved Oxygen (DO)	mg/L	Multimeter	4.9	4.4	3.1	≥5.0
6	PH	-	PH Meter	7.2	6.9	6.8	6-9
7	Total Dissolved Solid (TDS)	mg/L	Multimeter	448	451	476	1000
8	Total Suspended Solid (TSS)	mg/L	Gravimetric Method	5	7	4	NYS
9	Turbidity	NTU	Turbidity Meter	6.9	8.6	8.8	NYS
10	NH_3-N	mg/L	UV-Visible-Spectrophotometer	0.14	0.16	0.19	NYS
11	Oil and Grease	mg/L	APHA 23RD EDN. 2017 (5520- B)	2.1	2.3	2.1	NYS
12	PO_4	mg/L	UV-Visible-Spectrophotometer	0.63	0.57	0.58	2.0
13	TPH	mg/L	Gravimetric	<2.0	<2.0	<2.0	NYS

*NOTE: ECR =Environmental Conservation Rules, UVS=UV-Visible spectrophotometer, CRM=Closed Reflex Methods, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
30.08.2025	30.08.2025	30.08.2025

Annex 4: Ground Water Quality Analysis

BANGLADESH ENVIRONMENTAL ENGINEERING
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Physical/ Chemical/ Bacteriological Analysis of Groundwater Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)
Name of the Contractor	: TBEA CO., LTD
Description of sample	: Groundwater
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 10.08.2025

LABORATORY TEST RESULTS

SN	Parameters	Unit	Analysis Method	Concentration			Bangladesh Standard ECR ' 2023
				GW-1	GW-2	GW-3	
1	Arsenic (As)	mg/L	AAS	0.002	0.001	0.001	0.05
2	Chloride	mg/L	Titrimetric	33	24	27	250*
3	Coliform (Faecal)	N/100ml	MFM	0	0	0	0
4	Coliform (Total)	N/100ml	MFM	0	0	0	0
5	EC	µS/cm	EC Meter	322	355	289	NYS
6	Iron (Fe)	mg/L	AAS	0.49	0.67	0.44	0.3-1.0
7	Manganese (Mn)	mg/L	AAS	0.01	0.02	0.01	6-9
8	P^H	-	P^H Meter	7.2	7.2	7.3	1000
9	Salinity	%	Multimeter	0.04	0.05	0.07	NYS
10	TPH	mg/L	Gravimetric	<2.0	<2.0	<2.0	NYS
11	Turbidity	NTU	Turbidity Meter	0.02	0.01	0.02	5

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
30.08.2025	30.08.2025	30.08.2025

Annex 5: Soil Quality Analysis

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Customer/Accounts/Office Copy

Analysis of Soil Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project (Package-2)
Name of the Contractor	: TREA CO., LTD
Description of sample	: Surface Soil
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 10.08.2025

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters					
		pH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Carbon (OC)
1	SQ-01	7.3	0.6	4.29	0.05	6.58	0.54
2	SQ-02	7.4	0.59	6.82	0.07	6.31	0.95
3	SQ-03	7.6	0.71	3.94	0.06	4.93	0.62
Unit		-	ppm				%
Dutch Standard		NYS	36	85	0.8	100	NYS

*NOTE: PPM =Parts per million, NYS= Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
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30.08.2025	30.08.2025	30.08.2025

Page 1 of 1

Annex 1: Air Quality Analysis

EnviroCare International Ltd.
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Ref: ECIL/2025/315-12/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)***
Description of Sample	: Ambient Air Quality (AAQ)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 17.12.2025-23.12.2025
Date of Analysis	: 24.12.2025-29.12.2025
Reporting Date	: 30.12.2025

SN	Monitoring Locations	Concentration of different parameters in ambient air								
		SO_x	NO_x	O_3	CO	$PM_{2.5}$	PM_{10}	SPM	CO_2	Pb
1	AAQM-1 (Kudir Bottola, Khulna) 22.772409N; 89.616823E	15.04	16.18	5.43	1.12	16.09	26.56	47.16	290.16	BDL
2	AAQM-2 (Vadgati, Batiaghata, Khulna) 22.715719N; 89.577748E	8.19	10.80	4.36	0.93	17.53	28.62	55.33	271.48	BDL
3	AAQM-3 (Bagdari Bazar, Dumuria, Khulna) 22.733853N; 89.415113E	5.38	7.50	3.77	0.81	12.81	21.28	36.99	241.05	BDL
4	AAQM-4 (Chorgram, Tala, Satkhira) 22.740735N; 89.256071E	10.29	12.77	3.93	0.92	15.50	29.34	53.27	229.46	BDL
5	AAQM-5 (Magura, Satkhira) 22.741249N; 89.091239E	20.50	28.48	4.11	1.29	21.11	33.78	64.11	244.11	BDL
Unit		µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	mg/m³	mg/m³
Monitoring Duration as per APCR'2022		-	24	24	-	8	24	24	8	8
Monitoring Principle		***Light scattering technique***			***High precision Electrochemical sensor***					***AAS***
Bangladesh Standard		**80**	**80**	**100**	**5**	**65**	**150**	**NYS**	**NYS**	**0.5**
IFC EHS Guidelines' 30 April 2007		**20**	**200/ 1 hr.**	**100**	**NYS**	**25**	**50**	**NYS**	**NYS**	**NYS**

***Standard**: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022
***Note**: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** Machine; NYS=Not Yet set, BDL= Below Detection Limit

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Ref: ECIL/2025/316-12/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)***
Description of Sample	: Ambient Air Quality (AAQ)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 17.12.2025-23.12.2025
Date of Analysis	: 24.12.2025-29.12.2025
Reporting Date	: 30.12.2025

SN	Monitoring Locations	Concentration of different parameters in ambient air								
		SO_x	NO_x	O_3	CO	$PM_{2.5}$	PM_{10}	SPM	CO_2	Pb
6	**AAQM-6 (Protappur, Keshobpur, Jashore)** 22.868778N; 89.185722E	8.95	17.03	3.70	1.21	15.82	26.22	62.28	214.57	BDL
7	**AAQM-7 (Aminpur,Keshobpur, Jashore)** 22.960354N; 89.229797E	16.64	21.21	4.21	1.25	18.12	39.49	73.79	245.79	BDL
8	**AAQM-11 (Battail, Boro Pukur Par, Kustia)** 23.873121N; 89.092463E	19.72	26.47	8.23	1.75	44.07	66.23	126.85	324.50	BDL
Unit		µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	mg/m³	mg/m³
Monitoring Duration as per APCR'2022		-	24	24	-	8	24	24	8	8
Monitoring Principle		***Light scattering technique***			***High precision Electrochemical sensor***					***AAS***
Bangladesh Standard		**80**	**80**	**100**	**5**	**65**	**150**	**NYS**	**NYS**	**0.5**
IFC EHS Guidelines' 30 April 2007		**20**	**200/ 1 hr.**	**100**	**NYS**	**25**	**50**	**NYS**	**NYS**	**NYS**

***Standard**: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022
***Note**: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** Machine; NYS=Not Yet set, BDL= Below Detection Limit

Envirocare International Ltd. Dhaka

Prepared By	***Reviewed By***	***Approved By***
Md. Mehrab Hossain Manik B.Sc. in Environmental Science (KU) Consultant (Environment)	Sanjoy Kumar Mondol B.Sc. in ESRM (MBSTU) MS in Environmental Science (MBSTU) Technical Manager	Shorov Roy B.Sc. in ESRM (MBSTU) MS in Environmental Science (BAU) Quality Manager

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EnviroCare International Ltd.
A house of Inspection, Testing, Assessment & Consultancy

Ref: ECIL/2025/317-12/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)***
Description of Sample	: Ambient Air Quality (AAQ)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 17.12.2025-23.12.2025
Date of Analysis	: 24.12.2025-29.12.2025
Reporting Date	: 30.12.2025

SN	Monitoring Locations	Concentration of different parameters in ambient air								
		SO_x	NO_x	O_3	CO	$PM_{2.5}$	PM_{10}	SPM	CO_2	Pb
9	**AAQM-12 (Malihad, Mirpur, Kushtia)** 23.841134N; 88.914512E	8.07	11.88	4.59	1.28	10.47	19.13	34.83	262.92	BDL
10	**AAQM-13 (Baghdanga, Kushtia Sadar, Kushtia)** 23.841030N; 89.035337E	5.75	10.48	4.63	1.23	11.51	25.17	44.21	247.14	BDL
11	**AAQM-14 (Gopalnagar, Gangni, Meherpur)** 23.827057N; 88.777141E	6.38	10.58	2.81	1.09	12.34	23.68	41.93	271.86	BDL
12	**AAQM-15 (Natun Modondanga, Shampur, Meherpur)** 23.791050N; 88.679091E	8.28	13.68	5.36	1.36	20.20	36.35	64.01	301.14	BDL
Unit		µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	mg/m³	mg/m³
Monitoring Duration as per APCR'2022		-	24	24	-	8	24	24	8	8
Monitoring Principle		***Light scattering technique***			***High precision Electrochemical sensor***					***AAS***
Bangladesh Standard		80	80	100	5	65	150	NYS	NYS	0.5
IFC EHS Guidelines' 30 April 2007		20	200/ 1 hr.	100	NYS	25	50	NYS	NYS	NYS

***Standard**: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022
***Note**: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** Machine; NYS=Not Yet set, BDL= Below Detection Limit

Prepared By	***Reviewed By***	***Approved By***
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Annex 2: Noise Quality Analysis

EnviroCare International Ltd.
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Ref: ECIL/2025/318-12/ANLM

Test Results of Noise Level Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)***
Description of Sample	: Noise Level (NL)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 17.12.2025-23.12.2025
Date of Analysis	: 24.12.2025-29.12.2025
Reporting Date	: 30.12.2025

Test Results

Location	Concentration Present (dBA)						Category
	Day			Night			
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
NL-1-Kudir Bottola, Khulna 22.772409N; 89.616823E	56.31	73.56	40.16	50.88	68.9	40.5	Mixed Zone
NL-2, Vadgati, Batiaghata, Khulna 22.715719N; 89.577748E	54.12	71.37	37.97	40.40	58.4	33.2	Mixed Zone
NL-3, Bagdari Bazar, Dumuria, Khulna 22.733853N; 89.415113E	56.51	73.76	40.36	41.70	59.7	34.5	Mixed Zone
NL-4, Chargram Tala, Satkhira 22.740735N; 89.256071E	44.60	61.84	30.84	38.01	56.0	30.9	**Silent**
NL-5, Magura, Satkhira 22.741249N; 89.091239E	63.13	80.38	46.98	47.61	65.6	40.4	Mixed Zone
NL-6, Protappur, Keshobpur,Jashore 22.868778N; 89.185722E	53.98	71.23	37.83	39.40	57.4	32.2	Mixed Zone
NL-7, Aminpur, Keshobpur, Jashore 22.960354N; 89.229797E	51.71	68.96	35.56	40.18	58.2	33.0	Residential Zone

Bangladesh Standard	Day Time	Night Time
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential; Intuitional; Educational	55	45

* Noise Pollution Control Rules 2006, Schedule 1 (Zone Based Noise Level Standard): *ECIL* Laboratory, June, 2025

*Exceeds the Standard

Prepared By	***Reviewed By***	***Approved By***
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EnviroCare International Ltd.
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Ref: ECIL/2025/319-12/ANLM

Test Results of Noise Level Analysis

Name of Project	***:Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)***
Description of Sample	: Noise Level (NL)
Sample Collector	: EnviroCare Technical Team
Monitoring Date	: 17.12.2025-23.12.2025
Date of Analysis	: 24.12.2025-29.12.2025
Reporting Date	: 30.12.2025

Test Results

Location	Concentration Present (dBA)						Category
	Day			Night			
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
NL-11, Bottiol, Boropukurpar, Kushtia 23.873121N; 89.092463E	48.63	65.88	32.48	38.94	56.8	31.5	Silent Zone
NL-12, Malihad, Mirpur, Kushtia 23.841134N; 88.914512E	50.17	67.42	34.02	39.24	56.9	31.7	Residential Zone
NL-13, Baghadanga, Kushtia Sadar, Kushtia 23.841030N; 89.035337E	47.61	65.09	31.69	39.20	56.9	31.8	Silent Zone
NL-14, Gopal Nagar, Gangni, Meherpur 23.827057N; 88.777141E	48.84	66.61	34.21	39.96	57.4	32.3	Mixed Zone
NL-15, Natun Modondanga, Shampur, 23.791050N; 88.679091E	53.47	70.72	37.32	39.91	57.9	32.7	Silent Zone

Bangladesh Standard	Day Time	Night Time
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential; Intuitional; Educational	55	45

* Noise Pollution Control Rules 2006, Schedule 1 (Zone Based Noise Level Standard): *ECIL* Laboratory, June, 2025

*Exceeds the Standard

Prepared By	***Reviewed By***	***Approved By***
Md Mehrab Hossain Manik	Sanjoy Kumar Mondol	Shorov Roy
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Consultant (Environment)	MS in Environmental Science (MBSTU)	MS in Environmental Science (BAU)
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Annex 4: Surface water Lab Test Repot

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Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)
Description of sample	: Surface Water Sample
Sample Collected By	: Envirocare Technical Team
Sample Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 17th December, 2025 to 23rd December, 2025

LABORATORY TEST RESULTS

Sl No	Parameters	Analysis Method	Unit	Concentration *Bangladesh Standard ECR 2023, Schedule-2 (A)						*Bangladesh Standard ECR 2023, Schedule-2 (A)	
				SW1	SW2	SW3	SW4	SW5	SW6	d	f
01	**Ammonia**	UVS	mg/L	0.25	0.33	0.26	0.35	0.22	0.23	NYS	NYS
02	**Biochemical Oxygen Demand (BOD)**	5 days Incubation with 20° C	mg/L	3.86	5.56	4.67	7.65	8.96	6.01	6 or less	12 or less
03	**Chemical Oxygen Demand (COD)**	CRM	mg/L	44	52	37	20	58	36	50	100
04	**Coliform (Total)**	MFM	CFU/100ml	538	802	736	534	402	356	≤5,000	≤50,000
05	**Dissolved Oxygen (DO)**	Multimeter	mg/L	5.56	5.25	5.27	5.89	4.99	5.32	5 or more	NYS
06	**pH**	pH Meter	-	7.9	7.3	8.0	7.5	7.6	7.2	6-9	6.5-8.5
07	**Total Dissolved Solid (TDS)**	Multimeter	mg/L	142	319	438	190	160	152	1000	1000
08	**Total Suspended Solid (TSS)**	Gravimetric Method	mg/L	11	53	15	20	32	18	NYS	NYS
09	**Turbidity**	Turbidity Meter	NTU	11.4	78.0	6.4	21.2	21.1	22.3	NYS	NYS
10	**TOC**	UVS	%	7.24	5.72	5.22	8.21	8.68	7.41	NYS	NYS
11	**Phosphate**	UVS	mg/L	0.92	0.71	0.66	0.82	1.6	0.89	0.5	2

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
03.01.2026	03.01.2026	03.01.2026

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Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)
Description of sample	: Surface Water Sample
Sample Collected By	: Envirocare Technical Team
Sample Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 17th December, 2025 to 23rd December, 2025

LABORATORY TEST RESULTS

Sl No	Parameters	Analysis Method	Unit	Concentration *Bangladesh Standard ECR 2023, Schedule-2 (A)						*Bangladesh Standard ECR 2023, Schedule-2 (A)	
				SW7	SW11	SW12	SW13	SW14	SW15	d	f
01	**Ammonia**	UVS	mg/L	0.30	0.25	0.19	0.39	0.31	0.39	NYS	NYS
02	**Biochemical Oxygen Demand (BOD)**	5 days Incubation with 20° C	mg/L	9.01	4.45	5.03	4.97	7.99	5.84	6 or less	12 or less
03	**Chemical Oxygen Demand (COD)**	CRM	mg/L	67	32	18	52	27	58	50	100
04	**Coliform (Total)**	MFM	CFU/100ml	249	398	287	598	510	269	≤5,000	≤50,000
05	**Dissolved Oxygen (DO)**	Multimeter	mg/L	5.02	5.91	5.98	5.21	5.02	4.89	5 or more	NYS
06	**pH**	pH Meter	-	7.3	7.6	7.3	7.4	7.6	7.8	6-9	6.5-8.5
07	**Total Dissolved Solid (TDS)**	Multimeter	mg/L	147	184	69	222	132	149	1000	1000
08	**Total Suspended Solid (TSS)**	Gravimetric Method	mg/L	17	24	0.7	230	63	43	NYS	NYS
09	**Turbidity**	Turbidity Meter	NTU	23.1	10.2	1.1	190	62.2	33.0	NYS	NYS
10	**TOC**	UVS	%	7.54	6.89	8.12	6.92	6.73	4.43	NYS	NYS
11	**Phosphate**	UVS	mg/L	2.1	1.5	1.7	1.0	1.0	1.7	0.5	2

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
03.01.2026	03.01.2026	03.01.2026

Annex 3: Groundwater Lab Test Report

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Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)
Description of sample	: Ground Water Sample
Sample Collected By	: Envirocare Technical Team
Sample Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 17th December, 2025 to 23rd December, 2025

LABORATORY TEST RESULTS

Sl No	Parameters	Analysis Method	Unit	Concentration *Bangladesh Standard ECR 2023, Schedule-2 (A)						*Bangladesh Standard ECR 2023
				GW1	GW2	GW3	GW4	GW5	GW6	
01	**Arsenic (As)**	mg/L	AAS	0.003	0.003	0.002	0.001	0.002	0.002	0.05
02	**Coliform (Fecal)**	CFU/100 ml	MFM	0	0	0	0	0	0	0
03	**Coliform (Total)**	CFU/100 ml	MFM	0	0	0	0	0	0	0
04	**Chloride (Cl^-)**	mg/L	Titrimetric	287	382	12	243	303	27	250*
05	**Iron (Fe)**	mg/L	AAS	0.05	0.21	0.08	0.07	2.28	0.10	0.3-1.0
06	**Manganese (Mn)**	mg/L	AAS	0.03	0.03	0.03	0.03	3.25	0.03	0.4
07	**pH**	-	pH Meter	8.2	8.3	8.2	8.1	8.2	8.3	6.5-8.5
08	**EC**	µS/cm	EC Meter	1200	1790	1386	1070	1389	475	NYS
09	**Salinity**	NYS	Multimeter	0.67	0.95	0.89	0.67	0.64	0.34	NYS
10	**Turbidity**	NTU	Turbidity Meter	0.86	11.5	1.2	1.4	28.7	1.78	5

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
03.01.2026	03.01.2026	03.01.2026

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)
Description of sample	: Ground Water Sample
Sample Collected By	: Envirocare Technical Team
Sample Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 17th December, 2025 to 23rd December, 2025

LABORATORY TEST RESULTS

Sl No	Parameters	Analysis Method	Unit	Concentration *Bangladesh Standard ECR 2023, Schedule-2 (A)						*Bangladesh Standard ECR 2023
				GW7	GW11	GW12	GW13	GW14	GW15	
01	**Arsenic (As)**	mg/L	AAS	0.001	0.004	0.001	0.004	0.001	0.002	0.05
02	**Coliform (Fecal)**	CFU/100 ml	MFM	0	0	0	0	0	0	0
03	**Coliform (Total)**	CFU/100 ml	MFM	0	0	0	0	0	0	0
04	**Chloride (Cl^-)**	mg/L	Titrimetric	18	76	16	19	18	15	250*
05	**Iron (Fe)**	mg/L	AAS	0.23	0.15	0.31	0.12	0.17	0.14	0.3-1.0
06	**Manganese (Mn)**	mg/L	AAS	0.43	0.05	1.41	0.37	0.47	0.21	0.4
07	**pH**	-	pH Meter	8.2	8.2	8.3	8.1	8.3	8.3	6.5-8.5
08	**EC**	µS/cm	EC Meter	321	756	243	294	279	234	NYS
09	**Salinity**	NYS	Multimeter	0.18	0.39	0.16	0.18	0.15	0.13	NYS
10	**Turbidity**	NTU	Turbidity Meter	2.8	4.7	3.2	1.7	2.3	1.5	5

***NOTE**: ECR =Environmental Conservation Rules, AAS=Atomic Absorption Spectrophotometer, MFM=Membrane Filtration Method, NYS = Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
03.01.2026	03.01.2026	03.01.2026

Annex 5: Soil Quality

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)
Description of sample	: Soil Sample
Sample Collected By	: Envirocare Technical Team
Sample Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 17th December, 2025 to 23rd December, 2025

Analytical Result of Supplied Soil Samples

Sl. No.	Lab No.	pH	Texture	OC (%)	Copper (Cu) Available	Lead (Pb) (ppm)	Cadmium (Cd) Total	Chromium (Cr)
1	SC 1	7.8	Sandy Loam Sand-73.40 Silt-18.14 Clay-8.46	1.36	0.47	14.9	23.09	0.49
2	SC 2	7.8	Sandy Loam Sand-72.51 Silt-17.24 Clay-10.25	1.13	0.32	09.08	14.35	0.83
3	SC 3	7.8	Sandy Loam Sand-69.13 Silt-27.87 Clay-3.00	1.04	0.20	12.48	16.89	0.57
4	SC 4	7.6	Loamy Sand Sand-79.09 Silt-19.42 Clay-1.49	1.11	0.32	7.65	9.8	0.75
5	SC 5	7.7	Sandy Loam Sand-53.60 Silt-38.38 Clay-8.02	0.98	0.32	168.73	489.12	1.36
6	SC 6	8.0	Silt Loam Sand-46.17 Silt-50.32 Clay-3.51	1.47	1.68	22.03	46.27	0.88
7	SC 7	7.5	Clay Loam Sand-31.10 Silt-42.34 Clay-26.56	1.42	1.78	25.98	34.72	0.86
11	SC 11	8.1	Loamy Sand Sand-79.21 Silt-11.55 Clay-9.24	1.41	0.26	9.02	1.03	16.34
12	SC12	8.0	Sandy Loam Sand-77.38 Silt-9.73 Clay-12.89	1.11	0.22	5.79	0.87	13.26

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Sl. No.	Lab No.	pH	Texture	OC (%)	Copper (Cu) Available	Lead (Pb) (ppm)	Cadmium (Cd) Total	Chromium (Cr)
13	SC13	8.0	Loam Sand-46.73 Silt-26.32 Clay-26.95	1.10	1.17	10.8	0.52	33.74
14	SC 14	8.1	Loamy Sand Sand-83.34 Silt-9.34 Clay-7.32	0.92	0.17	8.37	0.34	13.57
15	SC 15	8.2	Sand Sand-89.13 Silt-4.45 Clay-6.42	1.43	0.21	10.02	0.23	17.33

Lab Test Performed by	Reviewed and checked by	Approved By
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04.01.2026	04.01.2026	04.01.2026

Package 4

Table 02: Ambient Air Quality Monitoring Result

Sl No	Inspection Area		SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx	CO
	Point	Sample	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	(mg/m^3)
1	Bagerhat-Pirojpur-Bhandaria TL	T-5/1	87.1	33	67	0	0	5.1	8.9	2.9
2		T-7/0	74.1	29	57	0	0	4.6	7.7	0.0
3		T-7/4	85.8	39	66	0	0	4.2	8.3	1.4
4		T-7/6	98.8	46	76	0.001	6	10.7	8.8	2.1
5		T-9/0	89.7	43	69	0.003	3	8.6	11.9	1.9
6	Purba Sadipur-Domar TL	T-18/1	81.9	45	63	0.004	4	8.7	9.9	1.3
7		T-19/1	88.4	36	68	0	1	4.5	14.0	0.0
8		T-21/3	91.0	35	70	0.005	10	11.3	12.8	1.3
9		T-24/0	92.3	33	71	0.002	3	12.3	14.0	2.9
10		T-24/1	78.0	38	60	0.004	9	8.3	7.7	1.5
11	Niamatpur-Patnitola TL	T-10/2	100	44	77	0.002	5	5.9	7.7	2.1
12		T-11/5	79.3	38	61	0.004	5	8.1	7.5	1.8
13		T-13/2	93.6	46	72	0	0	9.2	10.8	0.0
14		T-14/0	72.8	37	56	0	0	8.5	7.7	0.0
15		T-14/2	83.2	34	64	0	0	7.3	11.9	2.0
16	Domar-Hatibandha TL	T-8/0	75.4	31	58	0	2	10.8	8.2	2.6
17		T-12/1	71.5	35	55	0.003	8	8.8	13.4	0.3
18		T-15/0	93.6	34	72	0	0	5.3	13.9	0.0
19		T-18/0	89.7	33	69	0	0	10.5	9.7	1.7
20		T-19/2	78.0	34	60	0.004	6	5.0	14.8	1.3
21	Gopalganj-Shibchar TL	T-9/7	78.0	36	60	0	2	9.5	10.8	2.1
22		T-10/0	75.4	31	58	0	0	8.1	10.0	0.0
23		T-11/0	89.7	38	69	0	0	8.3	8.3	2.3
24		T-11/1	83.2	37	64	0.002	3	10.2	6.1	2.6
25		T-11/2	88.4	32	68	0	0	8.8	13.4	2.7
Bangladesh Standard (1)			**NYS**	**65**	**150**	**0.5**	**100**	**80**	**80**	**5**
Duration (Hours)				**24**	**24**	**24**	**8**	**24**	**24**	**8**

Prepared By

Bapan Paul
Executive (Operation)
B.Sc. in Civil and Environmental Engineering

Reviewed by

Basil Kubi
Executive (Operation)
B.Sc. in Environmental Science
M.Sc. in Environment Management

Approved By

Engr. Syed Tasnem Mahmood
Chief Environmental Engineer & CEO,
B.Sc. & M.Sc. (Civil and Environmental Engineering)
MIEB No.: M/35960

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Table 02: Ambient Noise Level Monitoring Result for Bagerhat-Pirojpur-Bhandaria Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
09-11-2025	ANL-01	Mixed area	54.89	44.60	60	50
10-11-2025	ANL-02	Mixed area	58.68	43.38	60	50
11-11-2025	ANL-03	Mixed area	57.67	40.90	60	50
12-11-2025	ANL-04	Mixed area	52.40	35.99	60	50
13-11-2025	ANL-05	Mixed area	56.01	37.60	60	50

Table 03: Ambient Noise Level Monitoring Result for Purbasadirpur-Domar Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
27-11-2025	ANL-01	Mixed area	52.97	34.09	60	50
28-11-2025	ANL-02	Mixed area	53.70	37.74	60	50
29-11-2025	ANL-03	Mixed area	47.79	40.17	60	50
30-11-2025	ANL-04	Mixed area	49.75	40.85	60	50
01-12-2025	ANL-05	Mixed area	48.72	40.95	60	50

Table 04: Ambient Noise Level Monitoring Result for Niamatpur-Patnitala Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
21-11-2025	ANL-01	Mixed area	55.05	39.25	60	50
22-11-2025	ANL-02	Mixed area	53.29	40.16	60	50
23-11-2025	ANL-03	Mixed area	49.96	37.80	60	50
24-11-2025	ANL-04	Mixed area	50.96	36.19	60	50
25-11-2025	ANL-05	Mixed area	50.80	35.66	60	50

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Table 05: Ambient Noise Level Monitoring Result for Domar-Hatibandha Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
03-12-2025	ANL-01	Mixed area	51.03	37.69	**60**	**50**
04-12-2025	ANL-02	Mixed area	52.51	41.56	**60**	**50**
05-12-2025	ANL-03	Mixed area	53.82	37.66	**60**	**50**
06-12-2025	ANL-04	Mixed area	45.30	36.07	**60**	**50**
07-12-2025	ANL-05	Mixed area	50.67	40.16	**60**	**50**

Table 06: Ambient Noise Level Monitoring Result for Gopalganj(N)-Shibchar Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
15-11-2025	ANL-01	Mixed area	55.15	37.81	**60**	**50**
16-11-2025	ANL-02	Mixed area	55.49	41.40	**60**	**50**
17-11-2025	ANL-03	Mixed area	54.65	35.81	**60**	**50**
18-11-2025	ANL-04	Mixed area	52.83	36.07	**60**	**50**
19-11-2025	ANL-05	Mixed area	52.82	41.12	**60**	**50**

Prepared By	Reviewed by	Approved By
Bapan Paul Executive (Operation) B.Sc. in Civil and Environmental Engineering	**Basil Kubi** Executive (Operation) B.Sc. in Environmental Science M.Sc. in Environment Management	**Engr. Syed Tasnem Mahmood** Chief Environmental Engineer & CEO, B.Sc. & M.Sc. (Civil and Environmental Engineering) MIEB No.: M/35960

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Package 5

Annexure 1

Ambient Air Quality Test Report

Package: 5

Evergreen Environmental Service
Best Quality, Best Service, Best Price

9001-2015

Ref: EES/2025/SEP/AAQ

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of Project	: **Dhaka and Western Zone Transmission Grid Expansion Project**
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 06.09.2025-07.09.2025
Date of Analysis	: 08.09.2025-11.09.2025
Reporting Date	: 13.09.2025

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
1	**KAAQ1** In front of Hafej Sheikh's House	31	61	101	5.9	5.5	0.48	BDL
2	**KAAQ2** Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	34	69	109	6.3	7.8	0.55	BDL
3	**KAAQ3** In front of Mamun Mia's House	39	70	115	6.5	6.6	0.63	BDL
4	**KAAQ4** In front of Late Abdul Razzak's House	35	72	121	6.8	6.7	0.53	BDL
Unit		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	mg/m3	$\mu g/m^3$
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro- Chemical Sensor			AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

*Standard: Air pollution Control Rules On 26th July 2022: Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005: vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single/Double Head)

Note: BDL = Bellow the detection level

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in *Environmental Science and Resource Management (ESRM), MBSTU*** ***MS in Environmental Science*, MBSTU**	**MD.NURULAFSAR** Director Operation
13.09.2025	**13.09.2025**

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Annexure 2

Inspection Results of Ambient Noise Quality Analysis

Package: 5

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Ref: EES/2025/SEP/NL

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of Project	**: Dhaka and Western Zone Transmission Grid Expansion Project**
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 06.09.2025-07.09.2025
Date of Analysis	: 08.09.2025-11.09.2025
Reporting Date	: 13.09.2025

Sampling Location:

Sl. No	Sample Locations	Sampling ID
1	In front of Hafej Sheikh's House 23.968853 N & 90.549165 E	KANM-1
2	Beside Kaliganj-Kapasia Rd. located near Nolir Bridge 23.963585 N & 90.549122 E	KANM-2
3	In front of Mamun Mia's House 23.965680 N & 90.554108 E	KANM-3
4	In front of Late Abdul Razzak's House 23.969766 N & 90.552512 E	KANM-4

Test Results:

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	Lmax	Lmin	Leq	Lmax	Lmin	
KANM-1 In front of Hafej Sheikh's House	49.1	62.5	33.9	38.2	45.6	35.5	Residential
KANM-2 Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	54.5	65.1	34.5	41.7	48.8	35.3	Mixed
KANM-3 In front of Mamun Mia's House	53.8	58.2	36.1	38.8	37.9	35.3	Residential
KANM-4 In front of Late Abdul Razzak's House	51.3	59.8	35.9	39.2	44.5	34.9	Residential

Bangladesh Standard	**Day Time**	**Night Time**
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential; Intuitional; Educational	55	45

Standard: Noise Pollution Control Rules, 2006

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Annexure 3

Test Results of Surface Water Quality Analysis

Package: 5

BANGLADESH ENVIRONMENTAL ENGINEERING
TRAINING & LAB SERVICES LTD.
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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-01
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.966951 N; 90.552715 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 01	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.21	-	-	-	-	-	-
BOD_5	mg/l	4	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	17	10	10	25	50	100	100
DO	mg/l	6.19	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.29	-	-	-	-	-	-
pH	--	7.3	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	52	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	14	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	3	-	-	-	-	-	-
Turbidity	NTU	9.9	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	24.09.2025	24.09.2025

Quarterly Environmental Monitoring Report

BANGLADESH ENVIRONMENTAL ENGINEERING
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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-02
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.965599 N; 90.551005 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 02	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.23	-	-	-	-	-	-
BOD_5	mg/l	7	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	18	10	10	25	50	100	100
DO	mg/l	6.12	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.28	-	-	-	-	-	-
pH	--	7.6	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	59	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	11	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	7	-	-	-	-	-	-
Turbidity	NTU	9.5	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	24.09.2025	24.09.2025

Quarterly Environmental Monitoring Report

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-03
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.966207 N; 90.549402 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 03	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.27	-	-	-	-	-	-
BOD_5	mg/l	6.3	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	18	10	10	25	50	100	100
DO	mg/l	5.6	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.27	-	-	-	-	-	-
pH	--	7.5	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	52	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	15	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	8	-	-	-	-	-	-
Turbidity	NTU	11.6	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
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24.09.2025	24.09.2025	24.09.2025

Quarterly Environmental Monitoring Report

BANGLADESH ENVIRONMENTAL ENGINEERING
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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-04
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.966470 N; 90.548220 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 04	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.31	-	-	-	-	-	-
BOD_5	mg/l	5.7	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	24	10	10	25	50	100	100
DO	mg/l	5.5	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.28	-	-	-	-	-	-
pH	--	7.7	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	43	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	15	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	5	-	-	-	-	-	-
Turbidity	NTU	10.4	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	24.09.2025	24.09.2025

Annexure 4

Test Results of Ground Water Quality Analysis

Package: 5

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-01
Location	: Hafej Sheikh's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.968512 N; 90.548888 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present KGWQ-01	ECR'2023 Standard*
Arsenic	mg/l	AAS	0.004	0.05
Cl^-	mg/l	Titrimetric	34	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	249	-
Fe	mg/l	AAS	1.4	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.5	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.08	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-02
Location	: Beside Kaliganj-Kapasia Rd. located near Nolir Bridge, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.963364 N; 90.548810 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present KGWQ-02	ECR'2023 Standard*
Arsenic	mg/l	AAS	**0.005**	0.05
Cl^-	mg/l	Titrimetric	**38**	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	**280**	-
Fe	mg/l	AAS	**1.2**	0.3-1
Mn	mg/l	AAS	**0.04**	0.4
pH	-	pH Meter	**7.7**	6.5-8.5
Turbidity	NTU	Turbidity Meter	**0.06**	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-03
Location	: Mamun Mia's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.965455 N; 90.554317 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present KGWQ-03	ECR'2023 Standard*
Arsenic	mg/l	AAS	**0.003**	0.05
Cl^-	mg/l	Titrimetric	**38**	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	**263**	-
Fe	mg/l	AAS	**1**	0.3-1
Mn	mg/l	AAS	**0.04**	0.4
pH	-	pH Meter	**7.8**	6.5-8.5
Turbidity	NTU	Turbidity Meter	**0.05**	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-04
Location	: Late Abdul Razzak's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.969981 N; 90.553189 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-04	
Arsenic	mg/l	AAS	0.003	0.05
Cl^-	mg/l	Titrimetric	37	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	281	-
Fe	mg/l	AAS	1.1	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.6	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.05	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	24.09.2025	24.09.2025

Annexure 5

Surface Soil Quality Test Report

Package: 5

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: SQ-01
Location	: In front of Hafej Sheikh's House
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.995968N; 90.423381E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-1	
1.	Cadmium (Cd)	PPM	**0.55**	0.8
2.	Chromium (Cr)	PPM	**27.81**	100
3.	Copper (Cu)	PPM	**4.36**	36
4.	Lead (Pb)	PPM	**6.17**	85
5.	Organic Content	%	**11.25**	-
6.	pH	-	**6.5**	-
7.	Texture	mm	**0.021**	-

N.B: NYS=Not Yet Set, the size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

Quarterly Environmental Monitoring Report

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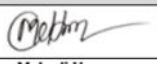
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-02
Location	: Beside Nolir Bridge, Boktarpur, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 06 September, 2025
GPS Location	: 23.966955 N; 90.549420 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-2	
1.	Cadmium (Cd)	PPM	**0.89**	0.8
2.	Chromium (Cr)	PPM	**47.23**	100
3.	Copper (Cu)	PPM	**4.12**	36
4.	Lead (Pb)	PPM	**8.99**	85
5.	Organic Content	%	**6.64**	-
6.	pH	-	**6.5**	-
7.	Texture	mm	**0.055**	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

Quarterly Environmental Monitoring Report

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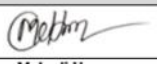
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-03
Location	: Beside the bridge of Mohani fuldi Rd
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.967744 N; 90.553671 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-3	
1.	Cadmium (Cd)	PPM	0.61	0.8
2.	Chromium (Cr)	PPM	29.88	100
3.	Copper (Cu)	PPM	3.43	36
4.	Lead (Pb)	PPM	6.52	85
5.	Organic Content	%	12.14	-
6.	pH	-	6.8	-
7.	Texture	mm	0.023	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.09.2025	**24.09.2025**	**24.09.2025**

Quarterly Environmental Monitoring Report

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of Package	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-04
Location	: Beside Late Abdul Razzak's House, Boktarpur, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 07 September, 2025
GPS Location	: 23.969622 N; 90.552497 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-4	
1.	Cadmium (Cd)	PPM	0.75	0.8
2.	Chromium (Cr)	PPM	52.58	100
3.	Copper (Cu)	PPM	3.45	36
4.	Lead (Pb)	PPM	7.88	85
5.	Organic Content	%	11.51	-
6.	pH	-	6.7	-
7.	Texture	mm	0.030	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
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24.09.2025	24.09.2025	24.09.2025

Package 6

Quarterly Environmental Monitoring Report

Annexure 1

Ambient Air Quality Test Report

Package: 6

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Ref: EES/2025/AUG/AAQ

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 11.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

SN	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
1	AAQ1 In front of Dulal Mia's house	32	58	96	5.7	6.3	0.41	BDL
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	µg/m³
Duration		24	24	8	24	24	8	24
Method of Analysis		Light scattering technique			High precision Electrochemical sensor			AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

*Standard: Air pollution Control Rules On 26th July 2022: Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005: vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single/Double Head)

Note: BDL = Bellow the detection level

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in** *Environmental Science and Resource Management (ESRM), MBSTU* ***MS** in Environmental Science*, MBSTU **25.08.2025**	**MD.NURULAFSAR** Director Operation **25.08.2025**

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Quarterly Environmental Monitoring Report

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Ref: EES/2025/AUG/AAQ

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 11.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

SN	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
1	AAQ2 In front of Dipak Chakraborty's Shop	35	61	103	5.9	6.4	0.52	BDL
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	µg/m³
Duration		24	24	8	24	24	8	24
Method of Analysis		Light scattering technique			High precision Electrochemical sensor			AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

*Standard: Air pollution Control Rules On 26th July 2022: Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005: vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single/Double Head)

Note: BDL = Bellow the detection level

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
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Ref: EES/2025/AUG/AAQ

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 12.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

SN	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
1	AAQ3 In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	33	59	107	6.3	6.8	0.54	BDL
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	µg/m³
Duration		24	24	8	24	24	8	24
Method of Analysis		Light scattering technique			High precision Electrochemical sensor			AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

*Standard: Air pollution Control Rules On 26th July 2022: Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005: vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single/Double Head)

Note: BDL = Bellow the detection level

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
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Ref: EES/2025/AUG/AAQ

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Results of Ambient Air Quality Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 12.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

SN	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
1	AAQ4 In front of Mohadev Karmakar's house	29	56	101	5.8	6.2	0.45	BDL
Unit		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m3	µg/m³
Duration		24	24	8	24	24	8	24
Method of Analysis		Light scattering technique			High precision Electrochemical sensor			AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

*Standard: Air pollution Control Rules On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005: vide S.R.O. NO. 220-Law/2005

Note: This ambient air monitoring report was usually accomplished by- portable OCEANUS AQM-09 & Air Sampler with Attachment (Single/Double Head)

Note: BDL = Bellow the detection level

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in** *Environmental Science and Resource Management (ESRM), MBSTU* ***MS** in Environmental Science*, MBSTU	**MD.NURULAFSAR** Director Operation
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Annexure 2

Inspection Results of Ambient Noise Quality Analysis

Package: 6

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Ref: EES/2025/AUG/ANLM

Test Results of Noise Level Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 11.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

Sampling Location:

Sl. No	Sample Location	Sampling ID
1	In front of Dulal Mia's house 23.864745 N & 90.475689 E	ANLM-1

Test Results:

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	L_{max}	L_{min}	Leq	L_{max}	L_{min}	
ANLM-1 In front of Dulal Mia's house	55.27	68.5	41.9	47.68	58.3	35.7	Mixed

Bangladesh Standard	Day Time	Night Time
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential: Intuitional: Educational	55	45

Standard: Noise Pollution Control Rules, 2006

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in** *Environmental Science and Resource Management (ESRM), MBSTU* ***MS*** *in Environmental Science,* MBSTU	**MD.NURULAFSAR** Director Operation
25.08.2025	**25.08.2025**

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Ref: EES/2025/AUG/ANLM

Test Results of Noise Level Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 11.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

Sampling Location:

Sl. No	Sample Location	Sampling ID
1	In front of Dipak Chakraborty's Shop 23.865882 N & 90.475720 E	ANLM-2

Test Results:

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	L_{max}	L_{min}	Leq	L_{max}	L_{min}	
ANLM-2 In front of Dipak Chakraborty's Shop	58.72	69.35	41.2	47.89	58.4	36.8	Mixed

Bangladesh Standard	Day Time	Night Time
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential: Intuitional: Educational	55	45

Standard: Noise Pollution Control Rules, 2006

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
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Test Results of Noise Level Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 12.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

Sampling Location:

Sl. No	Sample Location	Sampling ID
1	In front of Badal Mia's house 23.861849 N & 90.476507 E	ANLM-3

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	L_{max}	L_{min}	Leq	L_{max}	L_{min}		
ANLM-3 In front of Badal Mia's house	47.95	61.8	40.1	38.77	56.5	37.2	Residential	
Bangladesh Standard							**Day Time**	**Night Time**
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential: Intuitional: Educational							55	45

Standard: Noise Pollution Control Rules, 2006

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in** *Environmental Science and Resource Management (ESRM), MBSTU* ***MS** in Environmental Science*, MBSTU	**MD.NURULAFSAR** Director Operation
25.08.2025	**25.08.2025**

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ISO 9001-2015

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Ref: EES/2025/AUG/ANLM

Test Results of Noise Level Analysis

Name of the Project	**Dhaka and Western Zone Transmission Grid Expansion Project**
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of the Sample	: Sample was collected from project area
Sample Collector	: Collected by Evergreen Technical Team
Sample Date	: 12.08.2025
Date of Analysis	: 13.08.2025-24.08.2025
Reporting Date	: 25.08.2025

Sampling Location:

Sl. No	Sample Location	Sampling ID
1	In front of Mohadev Karmakar's House 23.867743 N & 90.476149 E	ANLM-4

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	L_{max}	L_{min}	Leq	L_{max}	L_{min}		
ANLM-4 In front of Mohadev Karmakar's House	46.61	58.7	38.2	38.11	54.8	35.4	Residential	
Bangladesh Standard							**Day Time**	**Night Time**
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential: Intuitional: Educational							55	45

Standard: Noise Pollution Control Rules, 2006

Lab Test Analyzed by	Approved By
Mehedi Hasan Jony **Consultant (Environment),** **Evergreen Environmental Service (EES)** **B.Sc. in** *Environmental Science and Resource Management (ESRM), MBSTU* ***MS*** *in Environmental Science*, MBSTU	**MD.NURULAFSAR** Director Operation
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Annexure 3

Test Results of Surface Water Quality Analysis

Package: 6

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: SWQ-01
Location	: Khal Beside Dulal Mia's Shop, Pubachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.864318 N; 90.475926 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		SWQ 01	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.29	-	-	-	-	-	-
BOD_5	mg/l	7	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	25	10	10	25	50	100	100
DO	mg/l	5.12	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.54	-	-	-	-	-	-
pH	--	7.1	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	83	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	26	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	9	-	-	-	-	-	-
Turbidity	NTU	14.2	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.08.2025	24.08.2025	24.08.2025

Quarterly Environmental Monitoring Report

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: SWQ-02
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.863404 N; 90.474864 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		SWQ 02	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.36	-	-	-	-	-	-
BOD_5	mg/l	13	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	32	10	10	25	50	100	100
DO	mg/l	4.45	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.49	-	-	-	-	-	-
pH	--	6.9	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	71	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	24	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	8	-	-	-	-	-	-
Turbidity	NTU	16.1	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
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24.08.2025	24.08.2025	24.08.2025

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: SWQ-03
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.862593 N; 90.476197 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		SWQ 03	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.25	-	-	-	-	-	-
BOD_5	mg/l	14	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	32	10	10	25	50	100	100
DO	mg/l	4.86	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.59	-	-	-	-	-	-
pH	--	7.1	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	81	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	25	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	9	-	-	-	-	-	-
Turbidity	NTU	17.3	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.08.2025	24.08.2025	24.08.2025

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: SWQ-04
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.862223 N; 90.475782 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		SWQ 04	a	b	c	d	e	f
Ammonia (NH_3)	mg/l	0.37	-	-	-	-	-	-
BOD_5	mg/l	6	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	29	10	10	25	50	100	100
DO	mg/l	5.14	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.61	-	-	-	-	-	-
pH	--	7.2	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	78	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	22	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	14	-	-	-	-	-	-
Turbidity	NTU	15.5	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
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24.08.2025	24.08.2025	24.08.2025

Annexure 4

Test Results of Ground Water Quality Analysis

Package: 6

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: GWQ-01
Location	: Beside Dulal Mia's Shop, Purbachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.864612 N; 90.475215 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present GWQ-01	ECR'2023 Standard*
Arsenic	mg/l	AAS	0.006	0.05
Cl^-	mg/l	Titrimetric	41	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	257	-
Fe	mg/l	AAS	0.43	0.3-1
Mn	mg/l	AAS	0.04	0.4
pH	-	pH Meter	7.1	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.05	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: GWQ-02
Location	: Beside Dipak Chakraborty's Shop, Purbachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.866261 N; 90.475607 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			GWQ-02	
Arsenic	mg/l	AAS	0.008	0.05
Cl^-	mg/l	Titrimetric	45	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	252	-
Fe	mg/l	AAS	0.49	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.1	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.07	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: GWQ-03
Location	: Beside Boro Kau Shree Shree Sarbojonin Durga Mondir, Purbachal, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.862167 N; 90.477112 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present GWQ-03	ECR'2023 Standard*
Arsenic	mg/l	AAS	0.006	0.05
Cl^-	mg/l	Titrimetric	51	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	279	-
Fe	mg/l	AAS	0.45	0.3-1
Mn	mg/l	AAS	0.02	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.06	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: GWQ-04
Location	: Beside Mohadev Karmakar's house, Purbachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.868053 N; 90.476480 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			GWQ-04	
Arsenic	mg/l	AAS	0.009	0.05
Cl^-	mg/l	Titrimetric	37	250*
Coliform (Fecal)	CFU/100 ml	MFM	0	0
Coliform (Total)	CFU/100 ml	MFM	0	0
EC	µS/cm	Multimeter	224	-
Fe	mg/l	AAS	0.52	0.3-1
Mn	mg/l	AAS	0.05	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.05	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer, MFM= Membrane Filtration Method

Lab Test Performed by	Reviewed and checked by	Approved By
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24.08.2025	24.08.2025	24.08.2025

Annexure 5

Surface Soil Quality Test Report

Package: 6

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: SQ-01
Location	: In front of Dulal Mia's house, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.864784 N; 90.476049 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			SQ-1	
1.	Cadmium (Cd)	PPM	0.69	0.8
2.	Chromium (Cr)	PPM	48.56	100
3.	Copper (Cu)	PPM	4.71	36
4.	Lead (Pb)	PPM	7.45	85
5.	Organic Content	%	8.97	-
6.	pH	-	6.9	-
7.	Texture	mm	0.045	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
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24.08.2025	24.08.2025	24.08.2025

Quarterly Environmental Monitoring Report

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: SQ-02
Location	: Beside Dipak Chakraborty's Shop, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.865711 N; 90.475979 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			SQ-2	
1.	Cadmium (Cd)	PPM	0.65	0.8
2.	Chromium (Cr)	PPM	40.19	100
3.	Copper (Cu)	PPM	5.33	36
4.	Lead (Pb)	PPM	6.76	85
5.	Organic Content	%	10.02	-
6.	pH	-	6.8	-
7.	Texture	mm	0.039	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.08.2025	24.08.2025	24.08.2025

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: SQ-03
Location	: Beside Athik Bridge, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.863131 N; 90.476066 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			SQ-3	
1.	Cadmium (Cd)	PPM	0.78	0.8
2.	Chromium (Cr)	PPM	51.35	100
3.	Copper (Cu)	PPM	4.92	36
4.	Lead (Pb)	PPM	5.87	85
5.	Organic Content	%	9.46	-
6.	pH	-	6.7	-
7.	Texture	mm	0.061	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.08.2025	24.08.2025	24.08.2025

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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of the Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Name of the Package	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: SQ-04
Location	: Char located Tongi Khal, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 12 August, 2025
GPS Location	: 23.863318 N; 90.476336 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			SQ-4	
1.	Cadmium (Cd)	PPM	0.64	0.8
2.	Chromium (Cr)	PPM	23.81	100
3.	Copper (Cu)	PPM	3.39	36
4.	Lead (Pb)	PPM	5.11	85
5.	Organic Content	%	12.99	-
6.	pH	-	6.8	-
7.	Texture	mm	0.039	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL	**Dr. Fatima Akter** Director, BEETLSL
24.08.2025	24.08.2025	24.08.2025

Package 7

Annex 1: Air Quality Analysis

ISO 9001-2015

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Ref: EES/2025/SEP/AAQM

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Test Results of Ambient Air Quality Monitoring

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS substation at Rupsha and 132/33 kV GIS substation at Phultola, Monirampur, Maheshpur, Meherpur on turnkey basis
Sample Collector	: Collected by Evergreen Technical Team
Monitoring Date	: 08.09.2025-10.09.2025
Date of Analysis	: 11.09.2025-17.09.2025
Reporting Date	: 18.09.2025

SN	Sample Locations	Concentrations of different parameters in ambient air							
		SPM	PM_{10}	$PM_{2.5}$	Pb	SO_2	NO_x	O_3	CO
1	AQ-1	85.8	47.1	26.9	BDL	9.1	9.1	8.8	0.28
2	AQ-2	93.2	53.7	23.1	BDL	6.9	5.5	10.4	0.59
3	AQ-3	104.9	46.3	19.5	BDL	5.7	7.9	5.9	0.34
4	AQ-4	85.1	61.6	23.6	BDL	11.4	13.9	7.5	0.61
5	AQ-5	98.7	57.8	29.4	BDL	8.9	8.2	5.1	0.34
Unit		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	mg/m3
Duration		8	24	24	24	24	24	8	8
Method of Analysis		Light Scattering Nephotometer			AAS	High Sensitivity Electrochemical			
Bangladesh Standard		**200**	**150**	**65**	**0.5**	**80**	**80**	**100**	**5**

*Standard: Air pollution Control Rules (**APCR**) On 26th July 2022; Vide S.R.O. NO. 255-Law/ 2022 and Environment Conservation Rules (ECR) 1997 through its subsequent amendment on 19th July, 2005; vide S.R.O. NO. 220-Law/2005.

***Note 01**: This ambient air monitoring report was usually accomplished by- portable **OCEANUS AQM-09** & Air Sampler with Attachment (**Single Head**)

***Note 02**: BDL = Below detection level, AAS=Atomic Absorption Spectroscopy

***Note 03**: **Sampling Location** and **GPS** have been incorporated in Chapter 3, Sub-chapter 3.1 of the Monitoring Report.

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Serial No.	Temperature	Humidity	Wind Speed
AQ-1	31.3 degree Celcius	70.91%	2.31 m/s
AQ-2	31.5 degree Celcius	70.38%	2.22 m/s
AQ-3	30.9 degree Celcius	71.23%	2.39 m/s
AQ-4	32.6 degree Celcius	70.51%	2.11 m/s
AQ-5	31.5 degree Celcius	71.89%	1.98 m/s

***Note 04 Source**: On site Recording by Anemometer

Evergreen
Environmental Service

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Annex 2: Noise Quality Analysis

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9001-2015

Ref: EES/2025/SEP/ANLM

EVERGREEN ENVIRONMENTAL SERVICE LABORATORY

Test Results of Ambient Noise Level Monitoring

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS substation at Rupsha and 132/33 kV GIS substation at Phultola, Monirampur, Maheshpur, Meherpur on turnkey basis
Sample Collector	: Collected by Evergreen Technical Team
Monitoring Date	: 08.09.2025-10.09.2025
Date of Analysis	: 11.09.2025-17.09.2025
Reporting Date	: 18.09.2025

SN	Sampling ID	Concentration Present (dBA)						Category
		Day			Night			
		L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
1	NL-1	52.01	69.5	41.5	39.97	63.5	35.9	Mixed
2	NL-2:	50.69	68.3	40.9	41.11	65.8	36.1	Mixed
3	NL-3	49.98	69.9	41.6	39.58	59.9	33.9	Mixed
4	NL-4:	59.13	74.1	43.1	40.29	65.1	35.5	Mixed
5	NL-5	55.11	72.8	37.7	37.47	67.8	34.6	Mixed

Bangladesh Standard	Day Time	Night Time
Industrial area	75	70
Commercial	70	60
Mixed area	60	50
Residential area	55	45
Silent Area	50	40
World Bank / IFC Standard		
Industrial area	70	70
Residential; Intuitional; Educational	55	45

*Note 01: **Sampling Location** and **GPS** have been incorporated in Chapter 3, Sub-chapter 3.1 of the Monitoring Report.

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Annex 4: Surface Water Lab Test Report

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS substation at Rupsha and 132/33 kV GIS substation at Phultola, Monirampur, Maheshpur, Meherpur on turnkey basis
Description of sample	: Surface water
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 08.09.2025-10.09.2025

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters											
		Ammonia	Total Nitrogen	BOD	COD	Coliform (Total)	DO	pH	Temperature	TDS	TSS	Turbidity	Oil and Grease
1	SW-1	0.45	0.69	4	6	10	6.98	6.7	21.2	30	4	5.12	1.1
2	SW-2	0.38	0.93	3	7	11	6.78	6.8	22.3	81	5	5.98	1.1
3	SW-3	0.30	1.27	5	8	17	7.50	7.0	20.7	57	5	7.33	1.0
4	SW-4	0.33	0.87	4	8	13	6.11	7.2	20.9	58	8	6.23	1.1
5	SW-5	0.46	1.13	3	7	16	7.03	7.5	21.5	34	7	5.19	1.0

Page 1 of 3

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SN	Sampling ID	Concentration presents in parameters											
		Ammonia	Total Nitrogen	BOD	COD	Coliform (Total)	DO	pH	Temperature	TDS	TSS	Turbidity	Oil and Grease
Unit		mg/L	mg/L	mg/L	mg/L	CFU/100ml	mg/L	-	°C	mg/L	mg/L	NTU	mg/L
Analysis method		UVS	UVS	5 days Incubation	CRM	MFM	Multimeter	pH Meter	Thermometer	Multimeter	Gravimetric	Turbidity Meter	APHA 23RD EDN. 2017 (5520-B)
Bangladesh Standard, ECR 2023, Category d		NYS	7	≤6	50	≤5000	≥5	6-9	NYS	1000	NYS	NYS	NYS

*NOTE: ECR =Environmental Conservation Rules, UVS=UV-Visible Spectrophotometer, CRM=Closed Reflex Methods, MFM=Membrane Filtration Method, NYS = Not Yet Set, BOD= Biochemical Oxygen Demand, COD= Chemical Oxygen Demand, DO= Dissolved Oxygen, TDS= Total Dissolved Solid, TSS= Total Suspended Solid

Page 2 of 3

Annex 5: Groundwater Lab Test Report

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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS substation at Rupsha and 132/33 kV GIS substation at Phultola, Monirampur, Maheshpur, Meherpur on turnkey basis
Description of sample	: Ground water
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 08.09.2025-10.09.2025

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters									
		Arsenic	Chloride	Coliform (Faecal)	Coliform (Total)	EC	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity
1	GW-01	0.003	32	0	0	518	0.6	0.02	7.5	0.14	1.43
2	GW-02	0.002	27	0	0	479	0.8	0.03	7.2	0.26	1.37
3	GW-03	0.002	19	0	0	555	0.9	0.04	7.1	0.21	2.01
4	GW-04	0.003	18	0	0	482	1.3	0.01	7.3	0.23	1.19
5	GW-05	0.002	37	0	0	499	0.6	0.03	7.5	0.20	1.55
Unit		mg/L	mg/L	CFU/100 mL	CFU/100 mL	µs/cm	mg/L	mg/L	--	ppt	NTU
Analysis Method		AAS	Titrimetric	MFM	MFM	EC Meter	AAS	AAS	pH Meter	Multimeter	Turbidity Meter
Bangladesh Standard, ECR 2023		0.05	250*	0	0	NYS	0.3-1.0	0.4	6.5-8.5	NYS	5

*NOTE: ECR=Environmental Conservation Rules, AAS=Atomic absorption spectrometry, MFM=Membrane Filtration Method, NYS=Not Yet Set, EC=Electrical Conductivity

Page 1 of 2

Annex 6: Soil Lab Test Report

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Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 230/132/33 kV GIS substation at Rupsha and 132/33 kV GIS substation at Phultola, Monirampur, Maheshpur, Meherpur on turnkey basis
Description of sample	: Surface Soil
Sample Collector	: Collected by Evergreen Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 08.09.2025-10.09.2025

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters						
		pH	Texture	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
19	SQ-1	6.5	<0.002	1.98	3.71	0.41	27.68	10.67
20	SQ-2	6.4	<0.002	2.38	4.25	0.45	33.59	12.27
21	SQ-3	6.4	<0.002	2.50	3.99	0.47	34.91	16.18
24	SQ-4	6.2	0.048	2.23	3.42	0.35	30.11	12.53
25	SQ-5	6.5	0.051	2.11	4.20	0.38	25.67	11.26
Unit		-	mm	ppm	ppm	ppm	ppm	%
Dutch Standard		NYS	NYS	36	85	0.8	100	NYS

*NOTE 01: PPM =Parts per million, NYS= Not Yet Set

*NOTE 02: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Page 1 of 2

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Customer/Accounts/Office Copy

Lab Test Performed by	Reviewed and checked by	Approved By
Mahadi Hasan Executive (Environmental Lab), BEETLSL	**Md. Nasim Reza** Environmental Monitoring Officer (Executive), BEETLSL.	**Dr. Fatima Akter** Director, BEETLSL
25.09.2025	25.09.2025	25.09.2025

Page **2** of **2**

Annexure-34: Status of CAP of the Existing Substations

	
Switchyard of Existing Bagerhat Substation	New transformer in Existing Bagerhat Substation
	
Switchyard of Existing Kushtia Substation	

Annexure 35: Worker Resting Schedule

Package 3

Worker Resting Schedule Register

Project Name:			Document Type: Rest Register
Month: Nov -25	Package:	3	Date: - 27/11/2025

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Riyaz Khan	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Atkhtar Ali	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Sabuj	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:0PM	
Sagor	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Adidito Rahaman	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md.Mamun	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Ashik Ali	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md.Arif	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md. Sharif	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Al Mamun	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Sensitivity: LNT Construction Internal Use

Worker Resting Schedule Register

Project Name:			Document Type: Rest Register
Month: Dec-25	Package:	3	Date: - 28/12/2025

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Riyaz Khan	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Atkhtar Ali	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Sabuj	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:0PM	
Sagor	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Adidito Rahaman	Fitter	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md.Mamun	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Ashik Ali	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md.Arif	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md. Sharif	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Al Mamun	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Sensitivity: LNT Construction Internal Use

Package 4



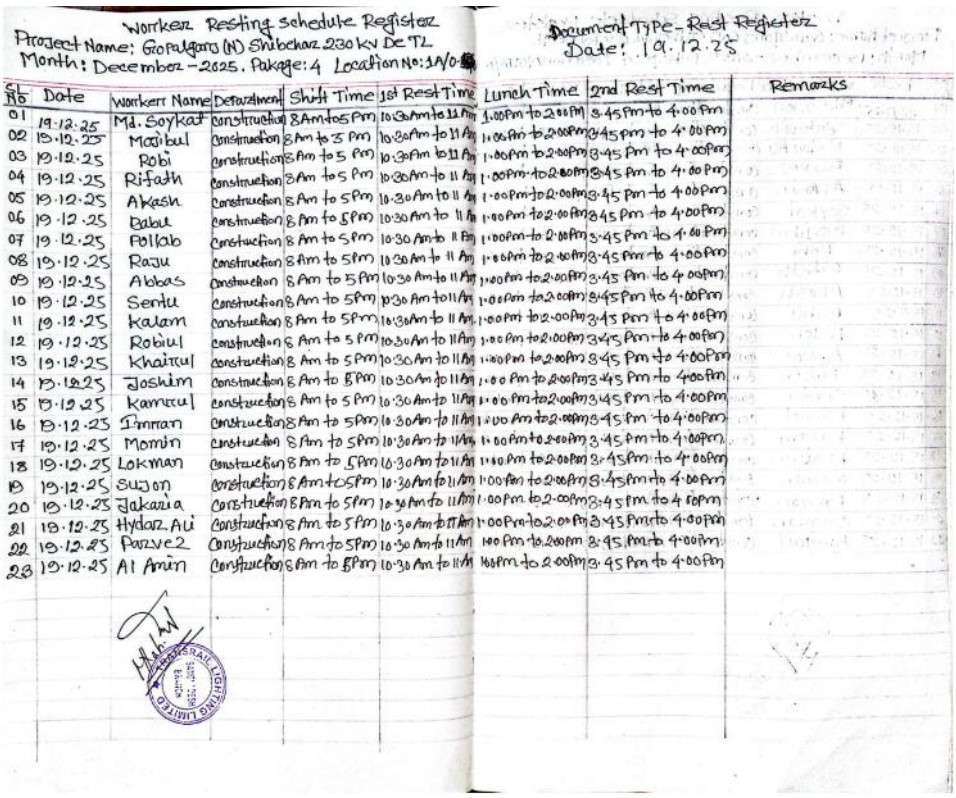
Worker Resting Schedule Register

Project Name: Gopalganj (N) Shibchar 230 kV DC TL
Month: December-2025. Pakage: 4 Location No: 1A/0

Document Type: Rest Register
Date: 15.12.25

Sl/No	Date	Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
01	15.12.25	Md. Sujon	Construction	8Am to 5Pm	10:30am to 11Am	1.00Pm to 2:00Pm	3:45Pm to 4:00Pm	
02	15.12.25	Jakaria	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
03	15.12.25	Hydar Ali	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
04	15.12.25	Parvez	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00 Pm	
05	15.12.25	Al Amin	Construction	8Am to Pm	10:30Am to 11Am	1.00 Pm to 2.00 Pm	3:45 Pm to 4.00 Pm	
06	15.12.25	Soykat	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
07	15.12.25	Mojibul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
08	15.12.25	Robi	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
09	15.12.25	Rifath	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
10	15.12.25	Akash	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
11	15.12.25	Babu	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
12	15.12.25	Pollab	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
13	15.12.25	Abbas	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
14	15.12.25	Raju	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
15	15.12.25	Sentu	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
16	15.12.25	Robiul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
17	15.12.25	Kalam	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
18	15.12.25	Khairul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
19	15.12.25	Momin	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
20	15.12.25	Imran	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00 Pm	
21	15.12.25	Lokman	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00 Pm	
22	15.12.25	Kamrul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45Pm to 4.00Pm	

CamScanner



Worker Resting Schedule Register

Project Name: Gopalganj (N) Shibchar 230 kV DC TL
Month: December-2025. Pakage: 4 Location No: 1A/0

Document Type - Rest Register
Date: 19.12.25

Sl No	Date	Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
01	19.12.25	Md. Soykat	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3.45Pm to 4.00Pm	
02	19.12.25	Mojibul	Construction	8Am to 5 Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
03	19.12.25	Robi	Construction	8Am to 5 Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
04	19.12.25	Rifath	Construction	8Am to 5 Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00 Pm	
05	19.12.25	Akash	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
06	19.12.25	Babu	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
07	19.12.25	Pollab	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00 Pm	
08	19.12.25	Raju	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
09	19.12.25	Abbas	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
10	19.12.25	Sentu	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
11	19.12.25	Kalam	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
12	19.12.25	Robiul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
13	19.12.25	Khairul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
14	19.12.25	Joshim	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
15	19.12.25	Kamrul	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
16	19.12.25	Imran	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
17	19.12.25	Momin	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
18	19.12.25	Lokman	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45Pm to 4.00Pm	
19	19.12.25	Sujon	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45Pm to 4.00Pm	
20	19.12.25	Jakaria	Construction	8Pm to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
21	19.12.25	Hydar Ali	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	
22	19.12.25	Parvez	Construction	8Am to 5Pm	10:30Am to 11Am	1.00 Pm to 2.00Pm	3:45 Pm to 4.00Pm	
23	19.12.25	Al Amin	Construction	8Am to 5Pm	10:30Am to 11Am	1.00Pm to 2.00Pm	3:45 Pm to 4.00Pm	

CamScanner

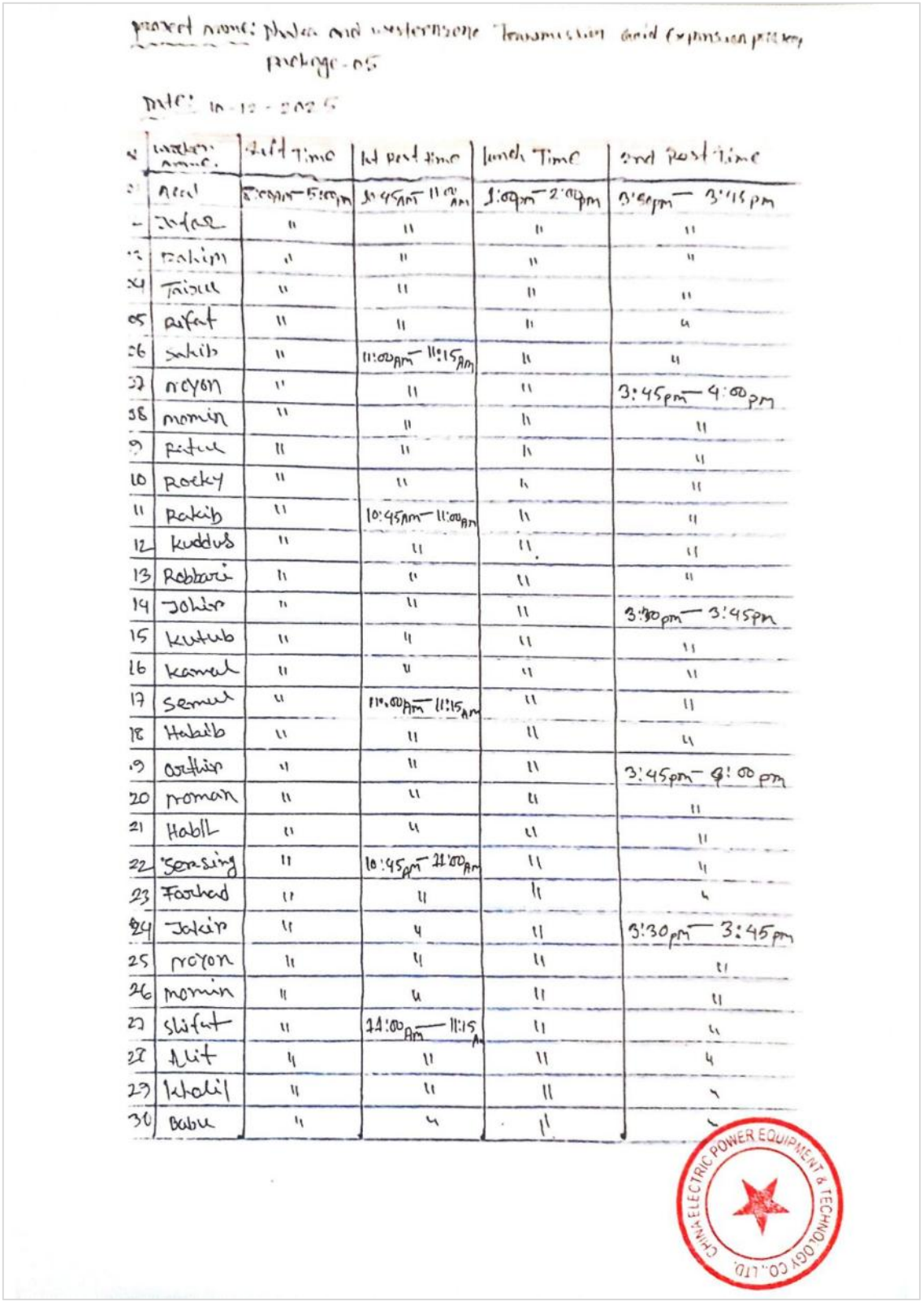
Package 5

Project name: Dhaka and western zone Transmission Grid Expansion project
Package no.

Date: 15-09-2025

Sl.	worker name	shift time	1st Rest time	lunch Time	end Rest Time
01	Alim	8:00AM – 5:00PM	10:45AM – 11:00AM	1:00pm – 2:00pm	3:30pm – 3:45pm
02	Lokman	"	"	"	"
03	Sojib	"	"	"	"
04	Sakib	"	"	"	"
05	Roeky	"	"	"	"
06	Asrat	"	"	"	3:45pm – 4:00pm
07	Tay	"	11:00AM – 11:15AM	"	"
08	Mamun	"	"	"	"
09	Sumon	"	"	"	"
10	Jinarul	"	"	"	"
11	Forhad	"	"	"	3:30pm – 3:44pm
12	Ratul	"	"	"	"
13	mamun	"	10:45AM – 11:15AM	"	"
14	Rakib	"	"	"	"
15	Aziz	"	"	"	"
16	Nanul	"	"	"	3:45pm – 4:00pm
17	Khalel	"	"	"	"
18	Kader	"	11:00 – 11:15AM	"	"
19	Hoshim	"	"	"	"
20	Kamal	"	"	"	"
21	Jibon	"	"	"	"
22	Rasel	"	"	"	3:30pm – 3:45pm
23	Robin	"	10:45AM – 11:00AM	"	"
24	Monin	"	"	"	"
25	Rifat	"	"	"	"
26	Alim	"	"	"	"
27	Rabbi	"	"	"	3:45pm – 4:00pm
28	Rasul	"	11:00AM – 11:15AM	"	"
29	Kutub	"	"	"	"
30	Lovely	"	"	"	"

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.



project name: Dhaka and western zone Transmission Grid Expansion project
package-05

Date: 10-12-2025

	worker name	1st Tea time	1st rest time	lunch Time	2nd rest time
	Area	5:00pm-5:10pm	10:45AM-11:00AM	1:00pm-2:00pm	3:30pm-3:45pm
1	Jafar	"	"	"	"
2	Rakim	"	"	"	"
3	Faisal	"	"	"	"
4	Arfat	"	"	"	"
5	Sakib	"	11:00AM-11:15AM	"	"
6	Royon	"	"	"	3:45pm-4:00pm
7	Nomin	"	"	"	"
8	Rifat	"	"	"	"
9	Rocky	"	"	"	"
10	Rakib	"	10:45AM-11:00AM	"	"
11	Kuddus	"	"	"	"
12	Robbani	"	"	"	"
13	Johir	"	"	"	3:30pm-3:45pm
14	Kutub	"	"	"	"
15	Kamal	"	"	"	"
16	Samad	"	11:00AM-11:15AM	"	"
17	Habib	"	"	"	"
18	Sadhin	"	"	"	3:45pm-4:00pm
19	Roman	"	"	"	"
20	Habil	"	"	"	"
21	Sensing	"	10:45pm-11:00AM	"	"
22	Fazlad	"	"	"	"
23	Jakir	"	"	"	3:30pm-3:45pm
24	royon	"	"	"	"
25	nomin	"	"	"	"
26	Shifat	"	11:00AM-11:15AM	"	"
27	Alif	"	"	"	"
28	Khalil	"	"	"	"
29	Babu	"	"	"	"

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

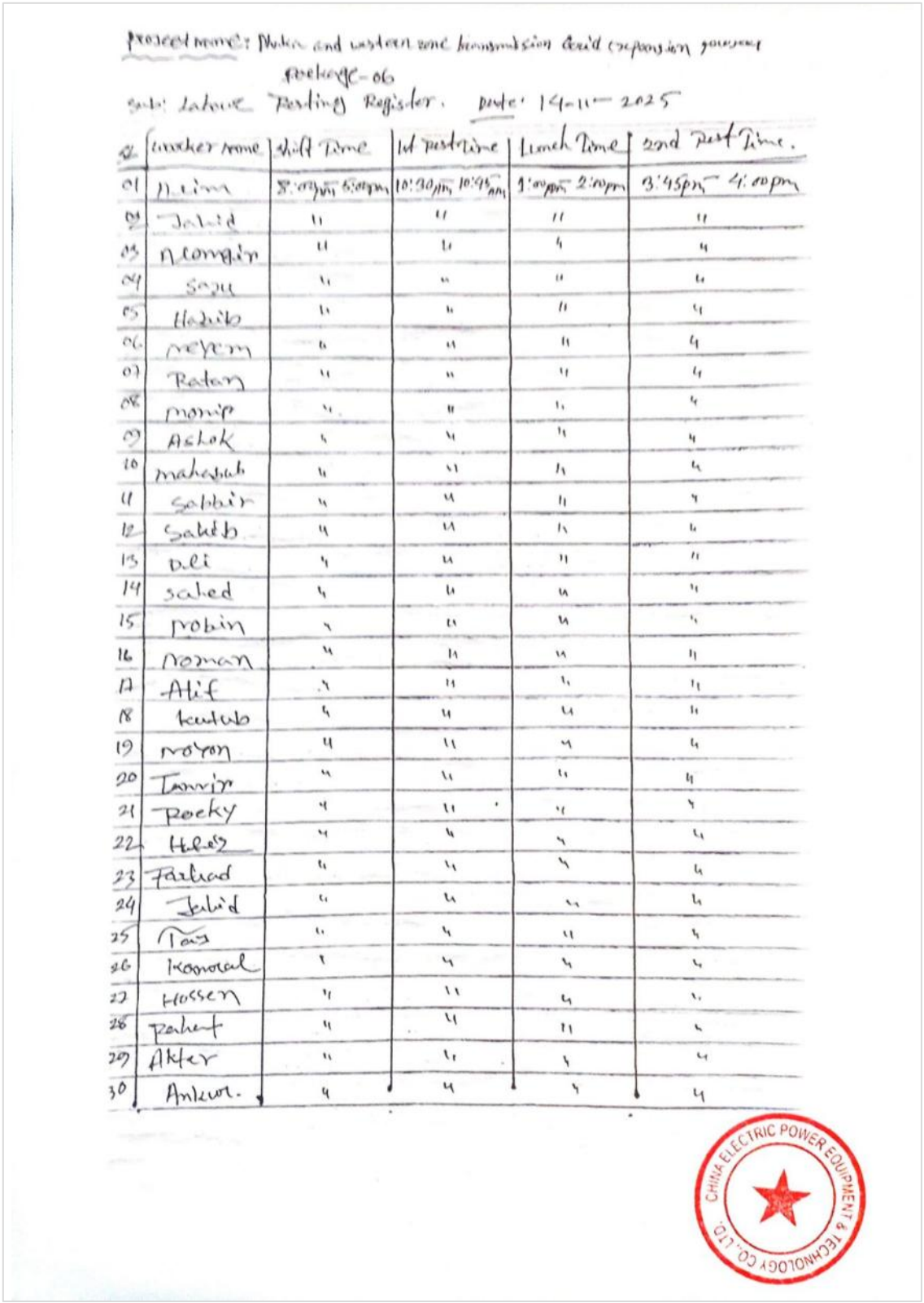
Package 6

project name: Dhaka and western zone "transmission Grid expansion project
Package-06

Subject: Labour Resting Register. Date: 07-08-2025

SL	worker name	shift time	1st Rest Time	lunch time	2nd Rest Time
01	Habibar	8:00am-5:00pm	10:30am-11:45am	1:00pm-2:00pm	3:30pm-3:45pm
02	minhaz	〃	〃	〃	〃
03	Habib	〃	〃	〃	〃
04	sayem	〃	〃	〃	〃
05	shanto	〃	〃	〃	〃
06	Asif	〃	〃	〃	〃
07	Alal	〃	〃	〃	〃
08	Rabul	〃	〃	〃	〃
09	rafon	〃	〃	〃	〃
10	kader	〃	〃	〃	〃
11	Dalil	〃	〃	〃	〃
12	Kabib	〃	〃	〃	〃
13	Kabal	〃	〃	〃	〃
14	promin	〃	〃	〃	〃
15	Alam	〃	〃	〃	〃
16	Kuddus	〃	〃	〃	〃
17	Habil	〃	〃	〃	〃
18	Kabal	〃	〃	〃	〃
19	Linced	〃	〃	〃	〃
20	Hasib	〃	〃	〃	〃
21	sagu	〃	〃	〃	〃
22	Babu	〃	〃	〃	〃
23	Sakib	〃	〃	〃	〃
24	monir	〃	〃	〃	〃
25	Hamman	〃	〃	〃	〃
26	monim	〃	〃	〃	〃
27	Jiol	〃	〃	〃	〃
28	rabul	〃	〃	〃	〃
29	semul	〃	〃	〃	〃
30	Sumon	〃	〃	〃	〃

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.



Project name: Dhaka and western zone transmission Grid expansion project
Package-06
Sub: Labour Posting Register. Date: 14-11-2025

Sl.	Worker name	Shift Time	1st Postime	Lunch Time	2nd Post Time.
01	Naim	8:00pm 5:00pm	10:30pm 10:45pm	1:00pm 2:00pm	3:45pm 4:00pm
02	Jahid	"	"	"	"
03	Alomgir	"	"	"	"
04	Sazu	"	"	"	"
05	Habib	"	"	"	"
06	Rejem	"	"	"	"
07	Rabby	"	"	"	"
08	Monir	"	"	"	"
09	Ashok	"	"	"	"
10	Mahabub	"	"	"	"
11	Sabbir	"	"	"	"
12	Sahib	"	"	"	"
13	Bli	"	"	"	"
14	Sahed	"	"	"	"
15	Robin	"	"	"	"
16	Roman	"	"	"	"
17	Atif	"	"	"	"
18	Kutub	"	"	"	"
19	Rayan	"	"	"	"
20	Tanvir	"	"	"	"
21	Rocky	"	"	"	"
22	Habib	"	"	"	"
23	Farhad	"	"	"	"
24	Jahid	"	"	"	"
25	Tanz	"	"	"	"
26	Kamrul	"	"	"	"
27	Hossen	"	"	"	"
28	Rahat	"	"	"	"
29	Akter	"	"	"	"
30	Ankur.	"	"	"	"

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 7

Worker Resting Schedule Register

Project Name: Mahespur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: December - 26	Package:	P7	Date: - 30/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Rubel Hossen	Civil-4 Man	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Sohag	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Mintu	Mason-rebar	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	PM	
Mizan	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Josim	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Mohosin	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Tuhin	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Sohel	Mason-rebar	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Amzad Hossain	Mason-rebar	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Afjal Hossain	Mason-rebar	08:00 AM - 05:00 PM	10:45 - AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Alamin	Mason-Brcik	08:00 AM - 05:00 PM	10:45 - ll:oo AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Tutul	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Salam	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	

Nahid	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Ibrahim	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Masibur	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Ahad	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Rahat	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Almas	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Jiarul	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Asraf	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Anisur	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Samim	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Rana	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Masibur	Mason-Brcik	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Almas	Mason-Brcik	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Tazemul	Mason-Tiles	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Iqbal	Mason-Tiles	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Soibur	Mason-Tiles	08:00 AM - 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Mizan	Cook	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	

Alamgir	Cook	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04:15 PM	
Komol Das	Helper	08:00 AM - 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Ainul	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Hanif	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Soriful	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Monser	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Nurnobi	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Manik	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Miraz	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Sumon	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Mehedi	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Rayhan	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Ripom	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Sabbir	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Zahid	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Zihad	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Sifat	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	

Soriful	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Kurban	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Sohel	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Ridoy	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Tuhin	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Aktarul	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Sujon	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Mofij	Helper	08:00 AM- 05:00 PM	10:45 - 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	
Al-amin	Electrician	08:00 AM- 05:00 PM	10:45 – 11:00 AM	01 :OO- 2:00 PM	04:00 - 04: 15 PM	



Md. Shahjalal
PE, CNEEC

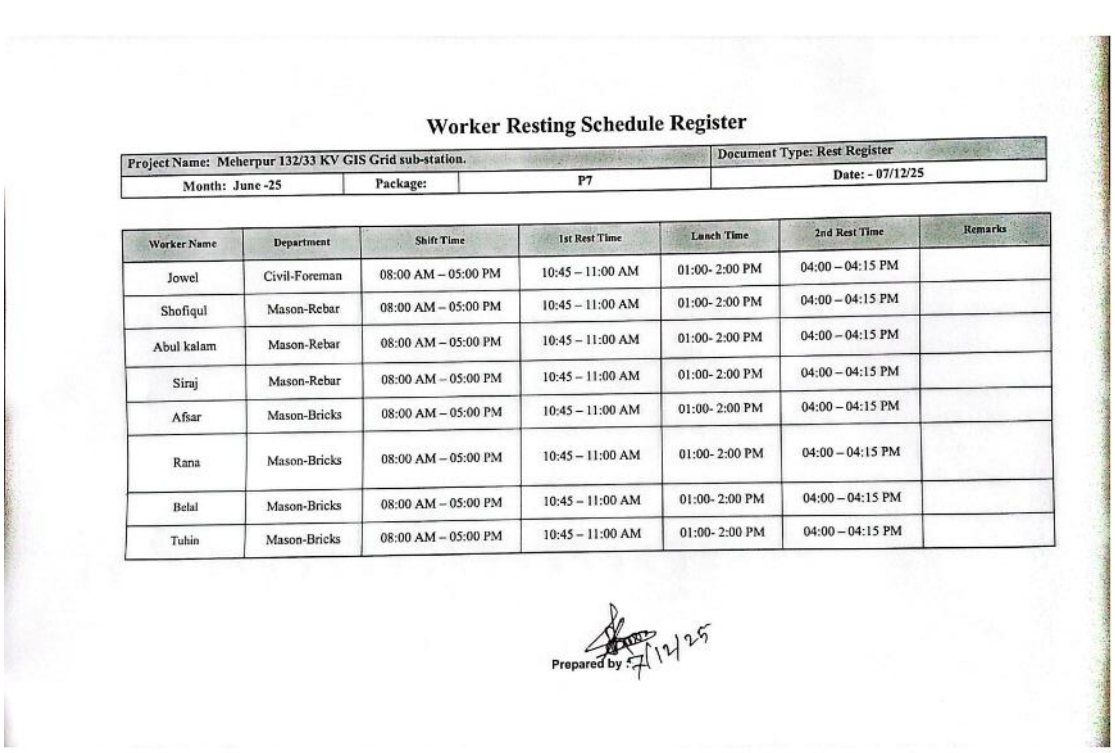
PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv GIS SUBSTATION AT PHULTOLA, MONIRAMPUR, MAHESHPUR, MEHERPUR ON TURNKEY BASIS (PACKAGE-7)

EMPLOYER	CONTRACTOR	SUB-CONTRACTOR
POWER GRID COMPANY OF BANGLADESH LTD. (PGCB)	CMEC-CNEEC Joint venture	STARPATH HOLDINGS LTD (SHL)

SITE NAME
132/33 KV GIS SUBSTATION AT MEHERPUR

DOCUMENT NAME
Worker Resting Schedule Register

CamScanner

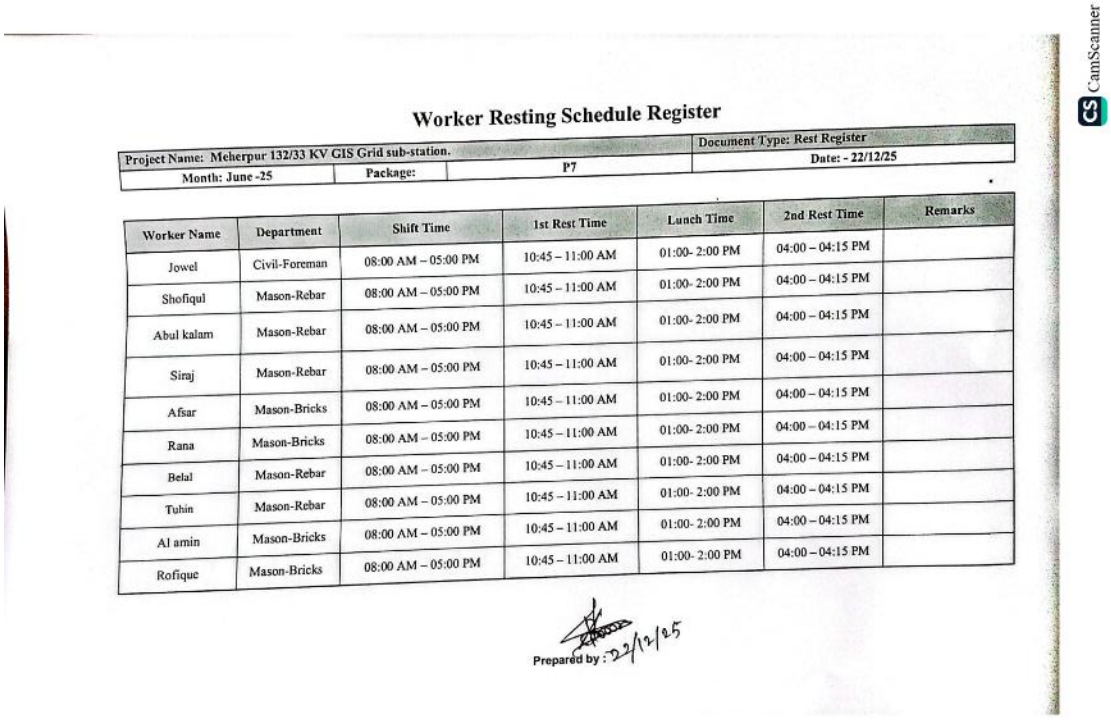


Worker Resting Schedule Register

Project Name: Meherpur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: June -25	Package:	P7	Date: - 07/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Jowel	Civil-Foreman	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Shofiqul	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Abul kalam	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Siraj	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Afsar	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Rana	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Belal	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Tuhin	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Prepared by : 7/12/25



Worker Resting Schedule Register

Project Name: Meherpur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: June -25	Package:	P7	Date: - 22/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Jowel	Civil-Foreman	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Shofiqul	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Abul kalam	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Siraj	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Afsar	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Rana	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Belal	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Tuhin	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Al amin	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Rofique	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Prepared by : 22/12/25

PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv 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	STARPATH HOLDINGS LTD (SHL)

SITE NAME
132/33 KV GIS SUBSTATION AT MONIRAMPUR

DOCUMENT NAME
Worker Resting Schedule Register

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Worker Resting Schedule Register

Project Name: Monirampur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: December -25	Package:	P7	Date: - 08/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Sumon khan	Civil-4 man	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Mojnu	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Kamal	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Sujon	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Jasim	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Rejaul	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Ismail	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

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Liton	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Rashel	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Saiful	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Siddik	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Shohan	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00-2:00 PM	04:00 – 04:15 PM	
Ershad Ali	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00-2:00 PM	04:00 – 04:15 PM	
Sirajul	Helper	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00-2:00 PM	04:00 – 04:15 PM	

Prepared by: 06/12/25 Md Shohag Islam (SHE)

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PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv 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	GPI ASIA TEL LTD (GPI)

SITE NAME
132/33 KV AIS EXTN. SUBSTATION AT SATKHIRA

DOCUMENT NAME
Worker Resting Schedule Register

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Worker Resting Schedule Register

Project Name: Satkhira 132/33 KV AIS Extn. sub-station.			Document Type: Rest Register
Month: December-25	Package:	P7	Date: - 09/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
MD. Alom	Civil-Foreman	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Jahangir	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Monirul Islam	Mason(Anchor bolt installor)	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Yousuf	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Baburam	Mason- Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Tota mia	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Helal	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Taijul	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Prepared by :

CamScanner

Worker Resting Schedule Register

Project Name: Satkhira 132/33 KV AIS Extn. sub-station.			Document Type: Rest Register
Month: December -25	Package:	P7	Date: - 22/12/25

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
MD. Alom	Civil-Foreman	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Jahangir	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Monirul Islam	Mason-(Anchor bolt installer)	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Yousuf	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Baburam	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Tota mia	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Helal	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Taijul	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Mahabub	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Riyaz	Helpher	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	

Prepared by :

CamScanner

Annexure 36: Land Handed Over to The Landowners After Completing Transmission Line Tower Erection and Stringing

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Satkhira- Rupsha TL (Package 3)</td><td>Niamatpur- Patnitola TL (Package 4)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Kaliganj- Maheshpur TL (Package 3)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Purba Sadipur- Domar TL (Package 4)</td><td>Kushtia-Meherpur TL (Package 3)</td></tr>
</table>

	
Domar- Hatibandha TL (Package 4)	Satkhira- Manirampur TL (Package 3)

Annexure 37: Good Practices

	
Tree Plantation under Package 4	Load Testing at store (Package 4)
	
Tower compensation cheque handover (SMTL and SRTL route of Package 3)	



Safety measures during stringing of river crossing section Domar Hatibandha TL



Tree Plantation at Package 4



Transportation facilities for worker (SRTL- Package 3)



Water spray to prevent dust generation under Package 7 at Phultala



Land is ready to cultivate again AP 5/1 SMTL

Annexure 38: Comments Responses on TPP of Package 3

Review Comments on Tree Plantation Plan (TPP) for P-3 under DWZTGEP

Comments by ADB	Responses by PMU
1. **Introduction:** According to the original 2019 IEE, a total of 1597, 2516, 717 & 1405 number of trees (>5 m in height) were estimated to be cleared along the Satkhira to Manirampur TL, Rupsha to Satkhira TL, Kushtia to Meherpur TL, and Kaliganj to Maheshpur TL sections. However, during the environmental survey for Addendum 1, 2, 3 and 4, this figure was reduced to 1,149, 264, 674 & 999 respectively. The TPP further reported (Appendix C-F) that only 300, 350, 200 & 205 trees were actually removed from Satkhira to Manirampur, Rupsha to Satkhira, Kushtia to Meherpur, and Kaliganj to Maheshpur TL sections, which require clarification and correct inconsistencies in tree felling no. aligning with disclosed IEE/EMP.	During preparation of IEE addendum, available data from IEE was used for the approved route; the route was not physically inspected. In case of the TPP; every span of every transmission line has been physically inspected and duly noted (see Annexure-H). In this process, the no. of trees required to be cut has been found to be reduced significantly. Additionally, the IEE and its addendums 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 (see Annexure-I). However, these numbers may change further based on the physical situation during actual right of way clearance.
1. **Species Selection:** It is mentioned that "The selection was guided by inputs from … the Divisional Forest Officers (DFOs) of respective areas," but no evidence was provided to substantiate this claim. There is no documentation of consultation minutes, written communication, or endorsement from the Forest Department (FD), nor any copy of a MoU or formal agreement with FD regarding species selection, location, or post-plantation management etc. Please confirm whether the suggestion attributed to the DFO was formally given, and supporting evidence (letters, meeting minutes, or signed MoU) should be appended for validation. Without such documentation, the reference to DFO input remains unsubstantiated.	The TPP is a planning tool. During execution stage, necessary MoUs would be signed with relevant entities.
2. **Tree Plantation Program:** Plantation site details (maps, layouts) not finalized, only described in narrative. The precise georeferenced mapping is required for	All the sites and plantation layout have not been finalized in the planning stage. After completion of the

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Comments by ADB	Responses by PMU
monitoring and accountability. We suggest to provide site-specific plantation maps, with number and type of saplings per site, survival target (100%) etc.	plantation program, georeferenced mapping data will be provided.
3. **Plantation Technique:** It is commendable that the TPP included the details on pit preparation, mulching, watering, and post-plantation care. However, no climate change resilience measures (drought-tolerant species, irrigation backup during dry months) has been considered in the TPP. Additionally, no mention of pesticide/herbicide management, though fertilizer is included. We strongly recommend to integrate climate change resilience measures and pest/nutrient management in the TPP to avoid secondary impacts.	Climate change resilience measures have been considered under Section 2 Species Selection (drought- and flood-tolerant species), Section 4.1 Plantation Phase and Section 4.2 Post Plantation Care (Watering/ Irrigation). IPM has been considered under Post Plantation Care and weeding has already been suggested for herbicide management.
4. **Institutional Arrangement:** Roles of PGCB, BFD, Contractor/NGO described, but no clear MoU or binding mechanism for collaboration. TPP should include institutional accountability, not just descriptive roles. Please provide an institutional organogram, specify reporting channels, and clarify responsibility for survival audits (by BFD/third party).	The TPP is a planning tool. During execution stage, necessary MoUs would be signed with relevant entities.
5. **Local Stakeholders and Communities.** Distribution of saplings to community is mentioned, but no clear accountability mechanism to ensure survival. We emphasize measurable performance indicators to be included in the TPP.	The distribution of seedlings to the community is intended to encourage local participation and promote community-led greening and environmental awareness. These seedlings are supplementary to the compensatory plantations required for tree felling.
6. **Limitations of the Plan.** The plan discusses only broad limitations (site readiness, coordination). It is recommended to include more specific and commonly encountered risks in such projects, such as community reluctance to maintain distributed saplings, damage from grazing/browsing, low survival rates, and potential budget overruns due to repeated replantation needs.	Suggested limitations are incorporated in Section 6 Limitation.
7. **Monitoring Measures:** Monitoring frequency (monthly during plantation, quarterly during maintenance) is mentioned but no survival target or corrective action threshold (such as <100% survival triggers replanting). The TPP requires	Survival target or corrective action threshold has been incorporated in Section 4.3 Replacement of Weak and Dead Saplings. Section 7 & 8 have been updated with independent verification by BFD/third party and

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Comments by ADB	Responses by PMU
adding measurable KPIs (survival %), independent verification by BFD/third party.	minimum acceptable survival rate (>85% after 3 years) respectively.
8. **Appendix C-F:** Introduction section states 1,155 trees will be felled whereas annexed tables of transmission line routes show about 1,055 trees (350 + 300 + 205 + 200). The numbers do not match. This inconsistency must be corrected.	9. Updated accordingly

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