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 comprises eight implementation packages involving the construction of 14 new GIS/grid substations, 20 bay extensions, and approximately 385.2 km of transmission lines, including 373.5 km of overhead transmission lines and 11.7 km of underground transmission lines. The transmission component includes seven Line-In Line-Out (LILO) connections. The project also includes the procurement of 18 drones to support transmission system inspection and monitoring. The proposed infrastructure is being implemented across multiple locations in Bangladesh to enhance the capacity, reliability, and operational efficiency of the national power transmission network.

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 26 July 2026 for the January– June 2026 reporting period. Updated IEE addendum has been prepared and disclosed where design changes or scope adjustments occurred, and environmental management and monitoring requirements have been incorporated into project implementation.

iv. During this reporting period, periodic environmental monitoring was conducted in Package 1, 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. Package-2 has been completely commissioned, the defect liability period is over and Operation Acceptance Certificate (OAC) has been issued. The infrastructure is currently being managed by O&M division of Power Grid.

v. 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 by applicable standards, subject to continued implementation of mitigation measures and corrective actions where required.

vi. During the January– June 2026 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.

vii. 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, 3–7 indicates general compliance

with national standards and lender requirements during the reporting period, subject to continued mitigation and strengthened supervision at selected sites.

viii. 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 4 for substation construction (packages 5, 6, 7 and 8) in total.
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 4 for substation construction.
National Environment, Health and Safety Clearance(s) Obtained	ECC was valid till 26/07/2026,
Contractor(s) Given Access to Site	19 for transmission line construction and 11 for substation construction

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Construction Progress (%)	Package-1: 82% Package-2: 100%, Commissioned in June 2025. Package-3: 95% Package-4: 87%. Package-5: 40% Package-6: 42% Package-7: 75% Package-8: Contract effective on 30/06/2026
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 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	8

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Corrective Action Required from Previous Reporting Period	1
Outstanding Corrective Action this Reporting Period	Yes – multiple actions; see Table 4-13 and Table 4-14
Non-Compliances Recorded this Reporting Period	One
Corrective Action Required	YES
Number of Health and Safety Incidents	16 Near Miss, First Aid Case, Medical Treatment Case, Restricted Work Case and Lost Time Injury
GRM Functional	YES, GRM functions at construction sites of packages 1, 3, 4, 5, 6 and 7.
Number of Unresolved Grievances from Prior Reporting Period	0
Number of Grievances Received in Reporting Period	0
Number of Grievances Resolved this Reporting Period	0
Number of Grievances Still Outstanding	0
Number of Grievances referred to Court of Law	0
Number of Grievances referred to the Accountability Mechanism	0
Total Training Conducted	70
Total consultation carried out	5
Number of packages that conducted Semi Annual Environmental Quality Monitoring	6 (Package 1,3,4,5,6 and 7) Package-2 has been completely commissioned, the defect liability period is over and Operation Acceptance Certificate (OAC) has been issued. The infrastructure is currently being managed by O&M division of Power Grid.
Safeguard Performance Snapshot during the reporting period	Environmental supervision and monitoring were conducted across Packages 1 and 3–7 during January–June 2026. Overall, most EMP requirements were implemented; however, several environmental quality exceedances, monitoring gaps, and site-specific safeguard issues were identified and are being addressed through corrective actions and continued monitoring.

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
	Key issues identified during the reporting period were as follows: • Air quality: IFC EHS Guideline exceedances for $PM_{2.5}$ and/or PM_{10} were recorded in **Package 3 at AQ13; Package 4 at AQ18–AQ37; Package 5 at AQ39–AQ41 and AQ38–AQ41 for $PM_{2.5}$ and PM_{10} respectively; Package 6 at AQ42–AQ45; and Package 7 at AQ46, AQ47, AQ49 and AQ50 for PM_{10} and AQ49–AQ50 for $PM_{2.5}$. All reported particulate concentrations remained within the Bangladesh ECR 2023 limits. Dust suppression measures, including water sprinkling, covering of stockpiles, traffic management and vehicle-speed control, were strengthened, with follow-up monitoring required. • Noise: Marginal exceedances of IFC/WHO guideline values were recorded at Package 4 (NL21, NL23, NL29, NL30, NL32, NL33 and NL35), Package 6 (NL42), and Package 7 (NL48). The reported levels remained within the applicable Bangladesh Noise Pollution (Control) Rules, 2025. Continued noise control and follow-up monitoring are required. • Surface water quality: Exceedances were recorded for BOD, COD, TDS and/or DO at locations in Packages 1, 3, 4, 5 and 6. Package 4 showed BOD exceedances and low DO at SW18–SW21; Package 5 showed BOD and oil-and-grease exceedances at SW23–SW25 and SW22–SW25, respectively; and Package 6 showed BOD exceedances at SW26–SW29 and low DO at SW27–SW29. • OHS/PPE: Ear protection was not available at Package 5 and Rupsha Substation under Package 7 and requires follow-up verification. • Other safeguard actions: Outstanding CAP actions relating to carbon-emission reporting, tree plantation, environmental monitoring, PPE/ear protection, environmental exceedances, budget utilization and other corrective measures are being followed up through the project CAP process.

Table 1A: Summary of Material Environmental Issues and Corrective Actions

Package / Location	Issue / Gap	Current Status	Corrective Action	Responsible Party	Target Date
P3 – AQ13	$PM_{2.5}$ and PM_{10} exceeded the IFC EHS guideline values; results remained within Bangladesh ECR 2023 limits.	Under follow-up	Continue dust suppression, cover stockpiles, control vehicle movement/speed, assess site conditions and potential sources during monitoring, and conduct follow-up monitoring to verify effectiveness.	Contractor / PMU / EQMS	31.12.2026
P4 – AQ18–AQ37	$PM_{2.5}$ and PM_{10} exceedances against IFC EHS guideline values were recorded at the monitored locations.	Under follow-up	Continue dust-control measures; document site conditions and potential sources during monitoring and conduct follow-up monitoring to assess effectiveness.	Contractor / PMU / EQMS	31.12.2026
P5 – AQ38–AQ41	PM_{10} exceedances at AQ38–AQ41 and $PM_{2.5}$ exceedances at AQ39–AQ41 against IFC EHS guideline values.	Under follow-up	Strengthen dust suppression, maintain covering of materials/stockpiles and traffic control, assess possible sources and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P6 – AQ42–AQ45	$PM_{2.5}$ and PM_{10} exceeded IFC EHS guideline values.	Under follow-up	Continue dust suppression and site-specific source assessment; conduct follow-up monitoring and document effectiveness.	Contractor / PMU / EQMS	31.12.2026
P7 – AQ46, AQ47, AQ49 & AQ50	PM_{10} exceedances at AQ46, AQ47, AQ49 and AQ50; $PM_{2.5}$ exceedances at AQ49–AQ50 against IFC EHS guideline values.	Under follow-up	Continue dust-control measures, assess potential sources and site conditions, and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P4 – NL21, NL23, NL29, NL30, NL32, NL33 & NL35	Daytime noise levels exceeded IFC/WHO guideline values at selected monitoring locations, although Bangladesh standards were complied with.	Under monitoring	Maintain noise-control measures, assess construction activity/source conditions and conduct location-specific follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P6 – NL42	Nighttime noise exceeded the IFC/WHO guideline value, while remaining within the applicable Bangladesh standard.	Under monitoring	Maintain noise-control measures and conduct follow-up monitoring to verify compliance and effectiveness.	Contractor / PMU / EQMS	31.12.2026

Package / Location	Issue / Gap	Current Status	Corrective Action	Responsible Party	Target Date
P7 – NL48	Daytime noise exceeded the IFC/WHO guideline value, while remaining within the applicable Bangladesh standard.	Under monitoring	Maintain noise-control measures and conduct location-specific follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P1 – SW1–SW5	BOD exceeded the applicable standard at all monitoring locations; COD exceeded at SW4; low DO was recorded at SW2, SW4 and SW5.	Under follow-up	Review potential sources of organic pollution, strengthen pollution-control measures and conduct follow-up surface-water monitoring.	Contractor / PMU / EQMS	31.12.2026
P3 – SW6–SW17	Localized exceedances of BOD, COD and TDS and low DO were recorded at several monitoring locations.	Under follow-up	Review potential project and non-project sources, strengthen pollution-control measures where required and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P4 – SW18–SW21	BOD exceeded the Bangladesh standard and DO remained below the applicable standard at all monitoring locations.	Under follow-up	Investigate potential sources, strengthen pollution-control measures and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P5 – SW22–SW25	BOD exceedances and oil-and-grease exceedances were recorded at the monitoring locations.	Under follow-up	Review potential pollution sources, strengthen pollution-prevention measures and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P6 – SW26–SW29	BOD exceedances and low DO were recorded at several monitoring locations.	Under follow-up	Review potential sources, strengthen pollution-control measures and conduct follow-up monitoring.	Contractor / PMU / EQMS	31.12.2026
P3 – GW6–GW17	Localized exceedances of arsenic at GW9, chloride at GW6 and GW7, and turbidity at GW6 and GW10.	Under follow-up	Compare with baseline, assess possible project and non-project sources/site conditions and continue follow-up groundwater monitoring.	Contractor / PMU / EQMS	31.12.2026
P4 – GW18–GW21	Iron, manganese and turbidity exceeded the applicable Bangladesh standards at GW21.	Under follow-up	Investigate possible sources, compare with baseline and conduct follow-up groundwater monitoring.	Contractor / PMU / EQMS	31.12.2026

Package / Location	Issue / Gap	Current Status	Corrective Action	Responsible Party	Target Date
P5 – GW22–GW25	Iron exceeded the applicable Bangladesh standard at GW22, GW23 and GW25.	Under follow-up	Assess possible sources and baseline trends and conduct follow-up groundwater monitoring.	Contractor / PMU / EQMS	31.12.2026
P7 – GW30–GW34	Iron exceedances were recorded at GW30, GW31, GW32 and GW34, with manganese exceedance at GW31.	Under follow-up	Assess possible sources and baseline trends and continue follow-up groundwater monitoring.	Contractor / PMU / EQMS	31.12.2026
P4 – SQ18–SQ21	Cadmium exceeded the applicable standard at all four locations; chromium exceeded the standard at SQ18 and SQ21.	Under follow-up	Verify the laboratory results, assess baseline comparison and possible sources, and conduct follow-up soil monitoring to determine whether the exceedances persist.	Contractor / PMU / EQMS	31.12.2026
P5 – SQ23 & SQ25	Cadmium exceeded the applicable standard at SQ23 and SQ25.	Under follow-up	Review baseline comparison and possible sources and conduct follow-up soil monitoring.	Contractor / PMU / EQMS	31.12.2026
P7 – SQ32	Q2 2026 pH of 5.4 was below the applicable Dutch standard range of 5.8–8.3.	Under follow-up	Review baseline and site conditions and conduct follow-up soil monitoring to confirm the result.	Contractor / PMU / EQMS	31.12.2026
P3 & P4 – Tree Plantation	TPP implementation/inventory and plantation progress, maintenance and survival records remain under preparation/follow-up.	Partially Complied	Complete/update the plantation inventory, document planting progress, maintenance and survival, and provide supporting photographs and approved TPP records.	PMU / Contractors / EQMS	31.12.2026
P5 & P7 – Rupsha Substation and active sites	Ear protection/PPE gap remains; PPE availability and actual use require verification.	Partially Complied	Provide required PPE and ear protection, maintain issue records and verify use through follow-up inspections and photographs.	Contractors / EHS Officers	Aug 2026
P1, P3, P4 and other applicable packages	Actual EMP expenditure/utilization information and supporting expenditure records remain incomplete.	Open	Verify actual expenditure, certified/paid amounts and balance and prepare the required utilization plan with supporting records.	PMU / Contractors / EQMS	Sep 2026

Package / Location	Issue / Gap	Current Status	Corrective Action	Responsible Party	Target Date
P1, P3–P7	Waste registers do not yet fully provide package-wise quantities, transfer records, disposal destinations, collector details and supporting receipts.	Open	Complete package-wise waste registers covering quantities, transfer dates, collector details, final destination, receipts and remaining stock.	Contractors / EQMS	Sep 2026
P1–P7	Annual CO_2 emission-reduction methodology and reporting remain outstanding.	Not Complied	Establish the methodology, collect required project data and calculate/report annual CO_2 emission reductions through the EMR.	PMU / EQMS / Contractors	Dec 2026
P1, P3–P7	Recurring site issues relating to fencing, waste, dust control, signage and PPE require documented closure verification.	Ongoing	Conduct regular follow-up inspections and document closure using dated before-and-after photographs and inspection records.	EQMS / Contractors / PMU	Dec 2026
P8 – Bagerhat, Bhandaria, Purba Sadipur & Niamatpur	Existing-substation oil-containment/impermeable bund actions remain under implementation/verification.	Being Complied / Partially Complied	Complete required containment measures, maintain interim spill-prevention controls and provide dated, location-specific evidence of completion/continued monitoring.	Power Grid O&M / GMD	31.12.2026

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

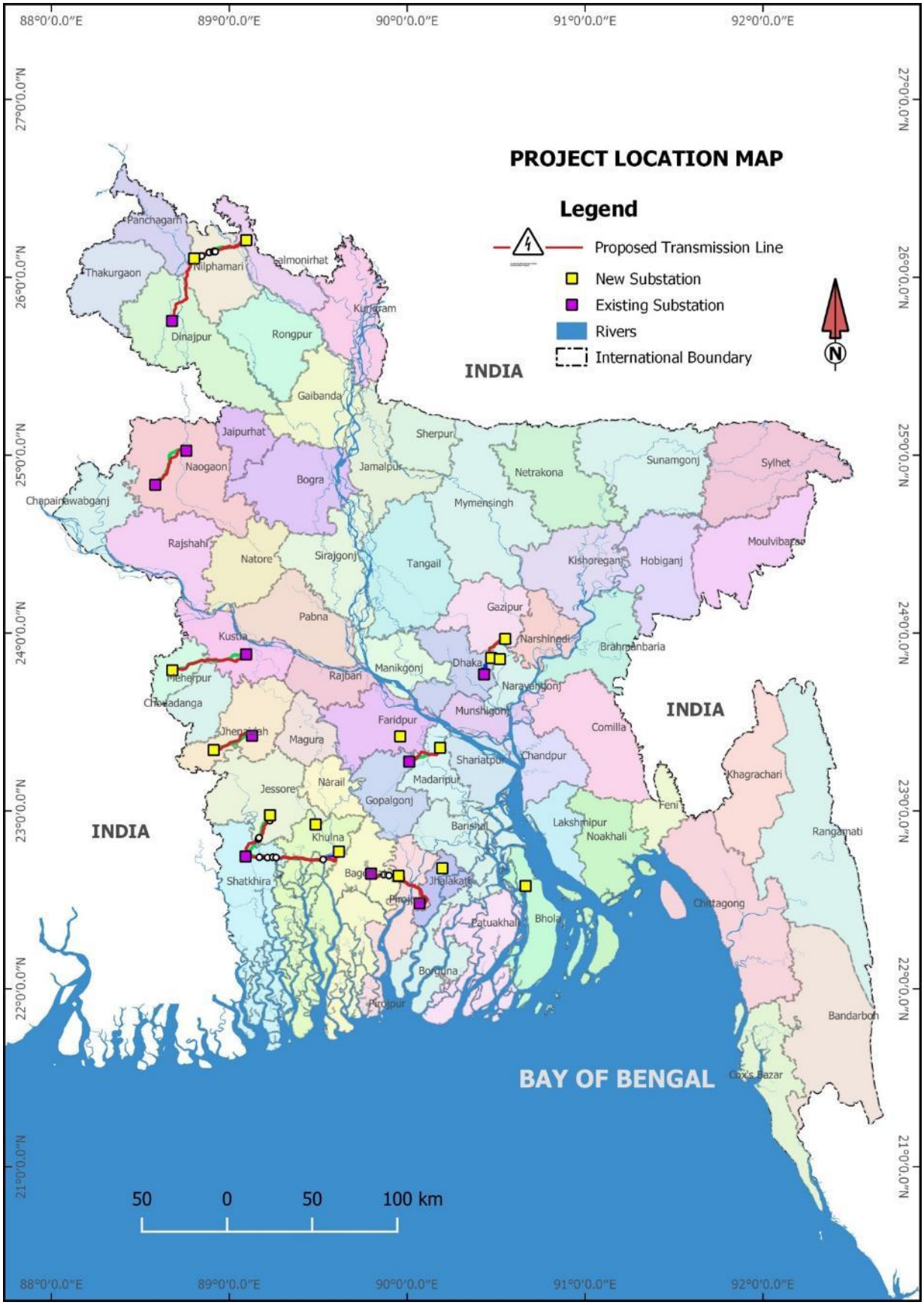
5. The project comprises eight implementation packages involving the construction of 14 new GIS/grid substations, 20 bay extensions, and approximately 385.2 km of transmission lines, including 373.5 km of overhead transmission lines and 11.7 km of underground transmission lines. The transmission component includes seven Line-In Line-Out (LILO) connections. The project also includes the procurement of 18 drones to support transmission system inspection and monitoring. The proposed infrastructure is being implemented across multiple locations in Bangladesh to enhance the capacity, reliability, and operational efficiency of the national power transmission network.

SL	Description	Quantity
1	Package 1: Construction of 400 kV and 230 kV transmission line	5.5 km
2	Package 2: Construction of Rampura–Bashundhara 132 kV underground transmission line	11.7 km
3	Package 3: Construction of 230 kV and 132 kV transmission lines consisting of: • Satkhira–Rupsha 230 kV Transmission Line – 62 km • Satkhira–Monirampur 132 kV Transmission Line – 33 km • Kushtia–Meherpur 132 kV Transmission Line – 48 km • Kaliganj–Maheshpur 132 kV Transmission Line – 28 km • LILO of Rupsha Power Plant–Khulna (South) 230 kV Line to Rupsha Substation – 0.5 km • LILO of Goyalpara–Bagerhat 132 kV Line to Rupsha Substation – 3.5 km • LILO of Gopalganj–Gallamari 132 kV Line to Rupsha Substation – 0.5 km • LILO of Noapara–Khulna (Central) 132 kV Line to Phultala Substation – 1 km	176.5 km
4	Package 4: Construction of 230 kV and 132 kV transmission lines consisting of: • Purbasadipur–Domar 230 kV Transmission Line – 46.5 km • Gopalganj–Shibchar 230 kV Transmission Line – 25 km • Niamatpur–Patnitala 132 kV Transmission Line – 32.5 km • Domar–Hatibandha 132 kV Transmission Line – 35 km • Bagerhat–Pirojpur–Bhandaria 132 kV Transmission Line – 49.5 km • LILO of Barishal–Bhola–Borhanuddin 230 kV Line to Bhola Substation – 1 km • LILO of Madaripur–Faridpur 132 kV Line to Bhanga Substation – 0.5 km • LILO of Barishal–Bhandaria 132 kV Line to Jhalakathi Substation – 1.5 km	191.5 km
5	Package 5: Kaliganj 400/230 kV GIS Grid Substation	1 No.
6	Package 6: Purbachal 400/230/132 kV GIS Grid Substation	1 No.
7	Package 7: • 1 × 230/132 kV Grid Substation (Rupsha, Bagerhat) • 4 × 132/33 kV Grid Substations (Phultala–Khulna, Maheshpur–Jhenaidah, Monirampur–Jashore, Meherpur) • 10 Bay Extensions	5 Substations and 10 Bay Extensions
8	Package 8: • 1 × 230/33 kV Grid Substation (Bhola) • 6 × 132/33 kV Grid Substations (Shibchar–Madaripur, Bhanga–Faridpur, Jhalakathi, Pirojpur, Hatibandha–Lalmonirhat, Domar) • 10 Bay Extensions	7 Substations and 10 Bay Extensions
9	Procurement of Drones	18 Nos.

6. 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

7. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 which is valid till 26/07/2026 (Annexure 1) and further extension will be applied on after approval of project DPP time extension. Bid documents of each package contain SCC Clause -47 which makes the EMP part of the contract (see Annexure 4). Also, as per SCC Clause 9.8 c) of the bid documents of each package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (see Annexure 5). Links to approved CESMPs of packages- 1, 2, 3, 4, 5, 6 and 7 are available Annexure 4. Also progress status on implementation of environmental management activities shown in the table below.

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

Package	Description	Progress	Construction Progress	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 (approved) submission date: 10/12/2025 Construction activity started: August 2025.	82%	31/12/2026	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	This package is in operation phase, therefore the monitoring was not carried out for this package
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	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	95%	30/06/2026 (extension till 30/09/2026 under progress)	Anti-theft charging of 04 major lines done. Environmental monitoring carried out for Package 3 during reporting period and presented the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Completion Date	Remarks on Performance
	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	IEE addendum-3 (final) submission date: 30/03/2023 IEE addendum-4 submission (final) date: 13/12/2023			
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 Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km	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	87%	30/06/2027	Environmental monitoring carried out for Package 4 during reporting period and updated the monitoring result in Chapter 3
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.	40%	30/06/2027	Environmental monitoring carried out for Package 5 during reporting period and updated the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Completion Date	Remarks on Performance
		IEE addendum 5 (final) submission date: 13/09/2024			
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	42%	30/06/2027	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 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.	Contract signed with CMEC-CNEEC JV on 27/02/2022. IEE addendum-4 submission (final) date: 13/12/2023	75%	31/03/2027	Environmental monitoring carried out for Package 7 during reporting period and updated the monitoring result in Chapter 3

Package	Description	Progress	Construction Progress	Completion Date	Remarks on Performance
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 CCCE-ETERN Consortium on 04/06/2026.	0%	31/12/2027	Necessary addendum to IEE will be prepared after approval of SSEMP and baseline monitoring report. It is confirmed that no physical works under package-8 has started as of yet. Only site survey, SLD, PSLD, Layout preparation, pre-section measurements works are ongoing at present. Construction activities will commence only after approval of the SSEMP. Project office has already issued letter to the contractor in this regard (Annexure 40).
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	√	x	x	x	x	x	x	N/A
Semi-annual Report	√	x	√	√	√	√	√	N/A
Reporting Period	Jan-Jun 26	–	Jan-Jun 26	Jan-Jun 26	Jan-Jun 26	Jan-Jun 26	Jan-Jun 26	N/A
Submission Date	10-May-26		7-Jul-26	12-Jul-26 (V1) 20- Jul 26 (V2) 29-Aug-26 (Final)	5-Jul-26	5-Jul-26	8-Jul-26	N/A
Approval Date	11-May-26		12-Jul-26	Under Review	8-Jul-26	8-Jul-26	9-Jul-26	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	√	√	√	x	√	√	√	N/A
Groundwater Quality	√	√	√	x	√	√	√	N/A
Soil Quality	√	√	√	x	√	√	√	N/A

Note: Package-2 has been completely commissioned, the defect liability period is over and Operation Acceptance Certificate (OAC) has been issued. The infrastructure is currently being managed by O&M division of Power Grid.

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		Construction activities will commence only after approval of the CESMP. Project office has already issued letter to the contractor in this regard (Annexure 40)

2 COMPLIANCE TO NATIONAL REGULATIONS

8. 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 26/07/2026.

9. 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.

10. 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) 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 for Package 3 and 4 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.	Partly 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.	Partly Complied	Public announcements are carried out before electrically charging any facilities. Annexure 38
12	The Environmental Management Plan (EMP) included in the EMP Report shall strictly be implemented and kept functioning on a continuous basis.	Partly 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.)	Partly Complied	Will be reported in case of any emergency.

Sl No	ECC Requirement	Compliance Status	Remarks
	d. Weather conditions 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.	Partly 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.	Partly 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.	Partly Complied	Land handed over to the landowners after commissioning transmission lines in a ready-to-cultivated condition (Annexure 36).
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.	Partially Complied	Environmental monitoring was conducted across the active packages. Only a few environmental parameters exceeded the applicable national standards at selected locations. Relevant measures should be initiated by concerned contractor to improve the surrounding environmental quality.
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	Partly 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	Complied	DoE officials are always welcomed to visit sites and offices.

Sl No	ECC Requirement	Compliance Status	Remarks
	to DOE officials to facilitate their visit to the site as and when necessary.		

2.1 Compliance with Environmental Covenants from the ADB Loan Agreement

11. 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.

12. 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, no physical displacement occurred. Economic displacement was managed under the approved RP through compensation for affected land, crops, and trees.

13. 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.

14. 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-2). 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-4). Links to approved CESMPs of packages 1, 2, 3, 4, 5, 6 and 7 are available in Annexure-4.

15. 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 & Annexure-8).

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	Complied	Project preparation, design, construction, implementation, operation, and decommissioning are complying with all applicable laws and regulations.

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	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.		
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.	Complied	Necessary RoW are being made available to the contractors as per work schedule following all applicable laws and regulations. The project does not involve any physical displacement or relocation of households. However, temporary and permanent economic impacts, including compensation for crops, trees, and land occupied by tower footings, are managed in accordance with the approved Resettlement Plan (RP). All compensation has been provided following the applicable national requirements.
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.	Complied	No physical displacement occurred. Economic displacement was managed under the approved RP through compensation for affected land, crops, and trees
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	Complied	This project will not have any impact on any Tribes, Minor Races, Ethnic Sects and Communities

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	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.		
Schedule 4, Para. 14	Human and Financial Resources to Implement Safeguards Requirements: The borrower shall make available or cause Power Grid to make available necessary budgetary and human resources to fully implement the EMP and the CAP.	Complied	Both Power Grid and the contractors have human and financial resources to implement the respective responsibilities of EMP and CAP.
Schedule 4, Para. 15	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.	Complied	All the provisions are included in bidding and contract documents.

Schedule #, Para. #	Covenant	Compliance Status	Remarks
Schedule 4, Para. 16	Safeguards Monitoring and Reporting: The Borrower shall do the following or shall cause Power Grid to do the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission. (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan. (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.	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 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 Annexure 5 of the SPS.	Complied	Loan amounts are used only for payment of approved contract components.
Schedule 4, Para. 18	Labor Standards, Health, and Safety: 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:	Complied	Annexure-7 & Annexure-8

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	(a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms. (b) do not use child labor. (c) do not discriminate against workers in respect of employment and occupation. (d) do not use forced labor. (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to 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.	Complied	Monitoring of all relevant compliances in all project sites.

2.2 Compliance with Project Administration Manual (PAM)

16. 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.

17. 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.

18. 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, No physical displacement occurred. Economic displacement was managed under the approved RP through compensation for affected land, crops, and trees. 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 displacement impacts.

19. Indigenous Peoples (category C): - The project does not affect dignity, human rights, livelihood systems or culture and territories of Indigenous Peoples.

20. 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 &

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

Institutional Setup of Power Grid for Implementation of EMP:

22. The contract Department of Power Grid is responsible for preparing the bid document, tender invitation, bid evaluation and contract award. They have ensured the inclusion of relevant EMP clauses in the bid document of each and every package which has been reviewed and confirmed by ADB. During implementation of the project, the PIU is responsible for overall supervision, monitoring, reporting and enforcing the EMP through the implementing contractors. Setup of the PIU is attached as Annexure 13. Power Grid's Social and Environmental Unit (ESU) will provide internal expertise support while Power Grid appointed consulting firm (EQMS Consulting Ltd.) will provide the external expertise required for the overall implementation of the EMP.

Table 2-3: Safeguard personnel 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	-	Project Director (A/C)
	Rezwan Ahmed Khan	Sub-Divisional Engineer	rezwan07.pgcb@gmail.com	[redacted]	Alternate Officer
2. Consultant	Abdul Halim	Team leader	abdul.halim@eqms.com.bd	[redacted]	Supervision and review
	Sadman Khaled Monsur	Deputy Team Leader	sadman.monsur@eqms.com.bd	[redacted]	Supervision and review
	Mehedi Hasan	Coordinator and Social Expert	hasan.mehedi@eqms.com.bd	[redacted]	Reporting and Monitoring
	Sk Abid Md Saad	Environmental Officer	abid.saad@eqms.com.bd	[redacted]	Reporting and Monitoring

Table 2-4: Safeguard personnel of the contractors

Package No	Name of the Safeguard Officer	E-mail	Contact No	Role
1	Rahad Hossain	rahad.hanbaek@gmail.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting
2	Faizur Rabbee	rabbeefaizur@gmail.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting
3	Anoop A T	anoopat@Intec c.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting
4	Suresh Hazra	suresh.hazra@transraillighting.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting
5	Sohel Rana		[redacted]	

Package No	Name of the Safeguard Officer	E-mail	Contact No	Role
6		sohelranaeee76@gmail.com		Overall EMP and EHS Monitoring and implementation and reporting
7	Tang Lei	556971@qq.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting
8	Ahmed Hasan Mahmood	ahmahmood55@gmail.com	[redacted]	Overall EMP and EHS Monitoring and implementation and reporting

2.3 Grievance Redress Mechanism

23. 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.

24. 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.

25. 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.

26. Contractors of packages 1, 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 no grievances have been raised to the GRC.

2.4 Compliance with Environmental Management Plan

27. 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.

28. 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.

29. 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.

30. 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	Complied	The secondary container should be used properly and available at all construction sites and chemical stores. Annexure 23
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 Tree plantation was carried out in existing SS (Annexure 39)
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

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
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 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	Complied	Proper PPE should be available at all sites

Item	Implemented Mitigation Measures	Corrective Action Taken	Compliance Status	Action to be Taken
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	Local people recruited in Rupsha and Phultola SS (Annexure 37)

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

Item	Implemented Mitigating Measures	Implemented Mitigating Measures	Compliance Status	Action to be Taken
				any of the machines or equipment do not cause any additional noise.
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

Item	Implemented Mitigating Measures	Implemented Mitigating Measures	Compliance Status	Action to be Taken
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

31. 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.

32. TPP has been prepared for packages-3 and 4 and will be implemented gradually throughout the execution phase of the respective packages. 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 societies has been used. No trees were required to be cut down. 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. Approved TPP of Package 3 and 4 attached in Annexure 41 and Tree Plantation Inventory format attached in Annexure 42.

Table 2-7: Details of compensatory tree planation program as of Jan- Jun 2026

Package	Tree plantation plan (TPP) prepared (Yes/No)	No. of trees planned to cut	Trees planned to replant as per TPP	No. of trees removed (as of June 26)	Trees planted (as of June 26)	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 June 26)	Trees planted (as of June 26)	Types of species planted	Plantation completion status	Survival status	Remarks
									installed underground.
Package-3	TPP submitted on 29 March 2026, approved on 01 April 2026	10,359	31,077	5,600	1,143	4	Ongoing	Under observation	The contractor is very slow in implementing the TPP. Project office has issued several letters in this regard.
Package-4	TPP submitted on 17 March 2026, approved on 01 April 2026	4087	12261	0	20	6	4063	Under observation	TPP implementation under progress
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									

Note: Tree Plantation Inventory preparation is under progress

3 ENVIRONMENTAL QUALITY MONITORING

33. During this reporting period, periodic environmental monitoring was conducted in Package 1, 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. Package-2 has been completely commissioned, the defect liability period is over and Operation Acceptance Certificate (OAC) has been issued. The infrastructure is currently being managed by O&M division of Power Grid.

3.1 Air Quality

34. This section identifies the status of the ambience air quality in the Package 1, 3, 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

35. 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**.

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	01.03.2026-03.03.2026
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 3				
Satkhira- Rupsha TL				
6.	AQ6	22.772409 N, 89.616823 E	Kudir Bottola, Khulna	16.05.2026-22.05.2026
7.	AQ7	22.715719 N, 89.577748 E	Vadgati, Batiaghata, Khulna	
8.	AQ8	22.733853 N, 89.415113 E	Bagdari Bazar, Dumuria, Khulna	
9.	AQ9	22.740735 N, 89.256071 E	Chorgram, Tala, Satkhira	
Satkhira- Manirampur TL				

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
10.	AQ10	22.741249 N, 89.091239 E	Magura, Satkhira	16.05.2026-22.05.2026
11.	AQ11	22.868778 N, 89.185722 E	Protappur, Keshobpur, Jashore	
12.	AQ12	22.960354 N, 89.229797 E	Aminpur, Keshobpur, Jashore	
Kushtia- Meherpur TL				
13.	AQ13	23.873121 N, 89.092463 E	Battail, Boro Pukur Par, Kushtia	16.05.2026-22.05.2026
14.	AQ14	23.841134 N, 88.914512 E	Malihad, Mirpur, Kushtia	
15.	AQ15	23.841030 N, 89.035337 E	Baghdanga, Kushtia Sadar, Kushtia	
16.	AQ16	23.827057 N, 88.777141 E	Gopalnagar, Gangni, Meherpur	
17.	AQ17	23.791050 N, 88.679091 E	Natun Modondanga, Shampur, Meherpur	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
18.	AQ18	23°17'5.39"N	T-2/0	17.06.2026-21.06.2026
		90°1'32.03"E		
19.	AQ19	23°17'55.37"N 90°2'29.59"E	T-4/0	
20.	AQ20	23°18'4.91"N 90°2'57.73"E	T-5/0	
21.	AQ21	23°19'46.89"N 90°10'35.89"E	T-15/0	
22.	AQ22	23°21'7.46"N 90°11'4.27"E	T-17/0	
Purba Sadipur- Domar TL				
23.	AQ23	25°45'12.57"N	T-1/0	07.06.2026-11.06.2026
		88°40'45.99"E		
24.	AQ24	25°51'37.67"N 88°43'50.66"E	T-8/0	
25.	AQ25	25°57'28.54"N 88°45'29.11"E	T-16/0	
		88°47'20.49"E		
Niamatpur- Patnitola TL				
26.	AQ26	25°47'24.11"N 88°41'21.95"E	T-3/0	12.06.2026-16.06.2026
27.	AQ27	25°52'9.21"N 88°45'24.23"E	T-9/0	
28.	AQ28	25°54'37.92"N	T-12/0	

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
		88°45'26.28"E		
29.	AQ29	25°56'41.08"N 88°45'31.14"E	T-15/0	
30.	AQ30	25°57'39.67"N 88°45'34.17"E	T-17/0	
Gopalganj-Shibchar TL				
31.	AQ31	23°21'16.19"N 90°11'1.90"E	TT-2	22.06.2026- 26.06.2026
32.	AQ32	23°21'7.46"N 90°11'4.27"E	T-17/0	
33.	AQ33	23°19'46.89"N 90°10'35.89"E	T-15/0	
34.	AQ34	23°19'18.52"N 90°4'39.57"E	T-8/0	
35.	AQ35	23°17'5.39"N 90°1'32.03"E	T-2/0	
Domar-Hatibandha TL				
36.	AQ36	25°57'28.54"N 88°45'29.11"E	T-16/0	07.06.2026- 11.06.2026
37.	AQ37	26° 0'26.82"N 88°45'48.31"E	T-20/0	
Package 5				
400/230 kV GIS Substation at Kaliganj, Gazipur				
38.	AQ38	23.968956 N 90.549117 E	In front of Hafej Sheikh's House	02.03.2026- 03.03.2026
39.	AQ39	23.968956 N; 90.549117 E	Located Near Nolir Bridge	
40.	AQ40	23.963902 N; 90.549012 E	In front of Mamun Mia's House	
41.	AQ41	23.969834 N; 90.552915 E	In front of Late Abdul Razzak's House	
Package 6				
400/230/132 KV GIS Substation at Purbachal				
42.	AQ42	23.864726 N; 90.475538 E	In front of Dulal Mia's house	17.02.2026- 18.02.2026
43.	AQ43	23.866024 N; 90.475774 E	In front of Dipak Chakraborty' s Shop	
44.	AQ44	23.862084 N; 90.476738 E	In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	
45.	AQ45	23.867947 N; 90.476117 E	In front of Mohadev Karmakar's house	
Package 7				
46.	AQ46	22°55'28.14" 89°29'7.99"E	Near 132/33 kV GIS substation at Phultola	03.03.2026 - 05.03.2026

SL No	Sample ID	GPS Coordinate	Location Details	Date & Time
47.	AQ47	22°46'20.37"N 89°37'2.29"E	Near 230/132/33 kV GIS substation at Rupsha	
48.	AQ48	23°47'27.41"N 88°40'42.72"E	Near 132/33 kV GIS substation at Maheshpur	
49.	AQ49	23°20'39.43"N 88°55'27.94"E	Near 132/33 kV GIS substation at Meherpur	
50.	AQ50	22°58'35.71"N 89°13'44.30"E	Near 132/33 kV GIS substation at Manirampur	

Source: Periodic Environmental Baseline Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

3.1.2 Analysis Results

36. Air quality was monitored using an automatic monitoring system measuring SPM, PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO, Pb, O_3, SO_x and NO_x. The monitoring results indicate that ambient air quality generally complied with the Air Pollution (Control) Rule, 2022. However, localized exceedances of the IFC EHS Guideline values for particulate matter ($PM_{2.5}$ and PM_{10}) were observed at several active construction locations. Pb remained below the detection limit (BDL) at all monitoring locations. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

37. Ambient air quality monitoring for Package 1 was conducted at AQ1–AQ5 during the baseline and Q1 2026 periods. The Q1 2026 results indicate that CO concentrations ranged from 1.09–1.36 mg/m³, remaining below the Bangladesh standard of 5 mg/m³. $PM_{2.5}$ concentrations ranged from 12.69–24.43 µg/m³, with exceedances recorded at AQ1, AQ3, AQ4 and AQ5 against the IFC/WHO guideline value of 15 µg/m³, while the value at AQ2 remained below the guideline. PM_{10} concentrations ranged from 20.52–37.37 µg/m³, remaining below both the Bangladesh standard of 150 µg/m³ and the IFC/WHO guideline value of 45 µg/m³. O_3 concentrations ranged from 30–33 µg/m³, remaining below the Bangladesh standard of 80 µg/m³ and IFC/WHO guideline value of 40 µg/m³. SOx ranged from 6.22–15.68 µg/m³ and NOx from 10.11–17.64 µg/m³, both remaining below the applicable IFC/WHO guideline values. Lead (Pb) was reported as BDL (Below Detection Limit) at all monitoring locations.

38. Ambient air quality in Package 3 showed an overall improvement compared with the baseline. $PM_{2.5}$ concentrations ranged from 11.36–45.01 µg/m³, while PM_{10} ranged from 20.32–68.87 µg/m³. The highest $PM_{2.5}$ (45.01 µg/m³) and PM_{10} (68.87 µg/m³) were recorded at AQ13, exceeding the IFC guideline values of 25 µg/m³ and 50 µg/m³, respectively. Other locations generally complied with the IFC guideline values, and all gaseous pollutants remained within the applicable standards. Pb was below the detection limit at all monitoring locations.

39. Ambient air quality in Package 4, $PM_{2.5}$ concentrations ranged from 32–47 µg/m³, while PM_{10} ranged from 61–85 µg/m³. $PM_{2.5}$ exceeded the IFC guideline (25 µg/m³) at all monitored locations. PM_{10} also exceeded the IFC guideline (50 µg/m³) at AQ18–AQ37, with the highest concentration of 85 µg/m³ recorded at AQ21. However, all measured particulate concentrations remained within the Air Pollution (Control) Rule, 2022 limits. Other monitored pollutants complied with the applicable standards, and Pb remained below the detection limit or at negligible concentrations.

40. Ambient air quality in Package 5, $PM_{2.5}$ concentrations ranged from 23–34 µg/m³, while PM_{10} ranged from 51–63 µg/m³. $PM_{2.5}$ exceeded the IFC guideline at AQ39 (28 µg/m³), AQ40 (30 µg/m³), and AQ41 (34 µg/m³), whereas PM_{10} exceeded the IFC limit at all monitoring locations (AQ38–AQ41), ranging from 51–63 µg/m³. All values remained within Air Pollution (Control) Rule, 2022 standards. SO_2, NO_2 and CO complied with the applicable standards, and Pb remained below the detection limit.

41. Ambient air quality in Package 6, $PM_{2.5}$ ranged from 31–37 µg/m³, while PM_{10} ranged from 56–60 µg/m³. Both $PM_{2.5}$ and PM_{10} exceeded the IFC guideline values at all monitoring locations (AQ42–

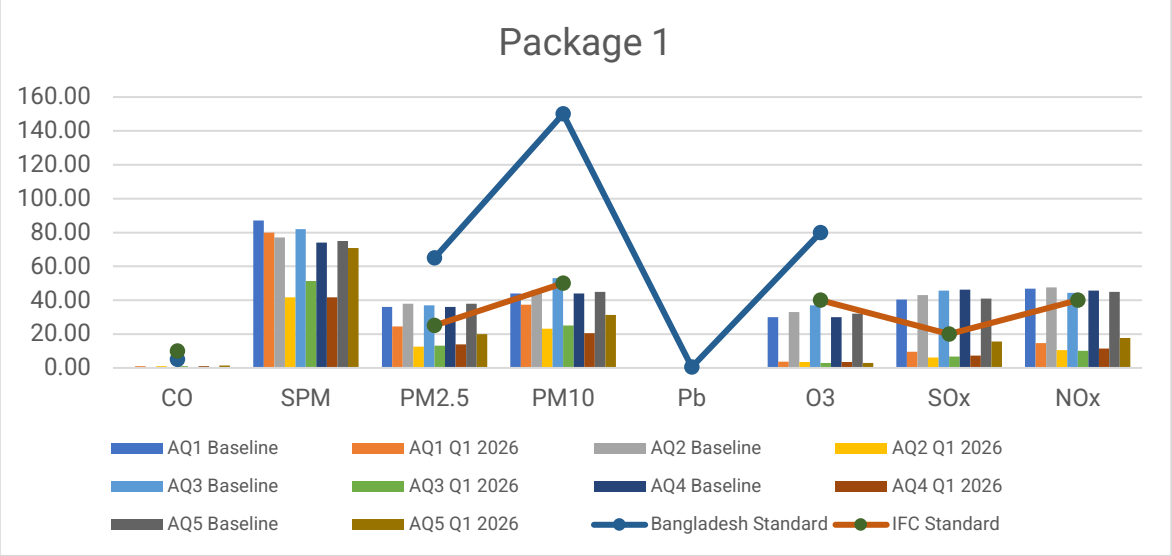
AQ45), although all concentrations remained within the Air Pollution (Control) Rule, 2022 standards. Other monitored pollutants remained within the applicable standards, and Pb was below the detection limit.

42. Ambient air quality in Package 7, $PM_{2.5}$ concentrations ranged from 20.50–28.70 µg/m³, while PM_{10} ranged from 48.50–62.30 µg/m³. $PM_{2.5}$ exceeded the IFC guideline at AQ49 (28.70 µg/m³) and AQ50 (25.40 µg/m³, marginally above the limit). PM_{10} exceeded the IFC guideline at AQ46 (50.40 µg/m³), AQ47 (58.20 µg/m³), AQ49 (62.30 µg/m³), and AQ50 (60.50 µg/m³), while AQ48 (48.50 µg/m³) complied with the IFC guideline. All monitored values remained within the Air Pollution (Control) Rule, 2022 and Pb remained below the detection limit.

43. Overall, ambient air quality across the project remained compliant with the Air Pollution (Control) Rule, 2022. Localized exceedances of the IFC EHS Guideline values for $PM_{2.5}$ and PM_{10} were observed mainly at active construction areas due to localize traffic movement as construction activities were limited during the monitoring period. In response, dust suppression measures, including regular water sprinkling, covering of material stockpiles, traffic management, and vehicle speed control, were strengthened, and follow-up monitoring will be undertaken (if any construction activities or materials are present in respective sites) to evaluate the effectiveness of these mitigation measures.

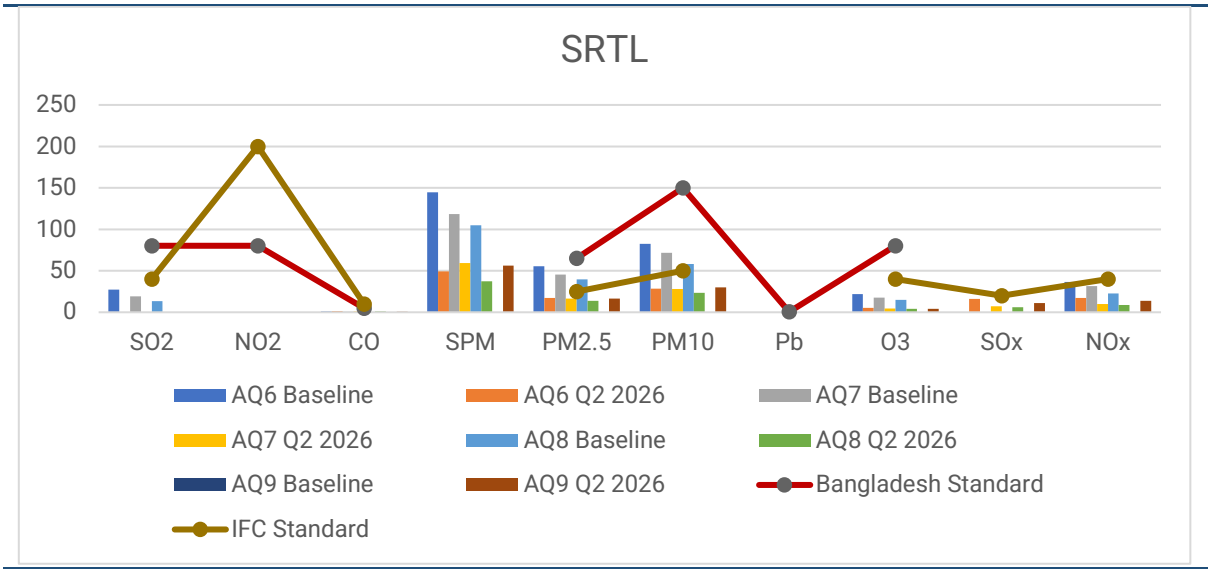
Figure 3-1: Air Quality Analysis Results in Package 1, 3, 4, 5, 6 and 7 project locations

Package 1

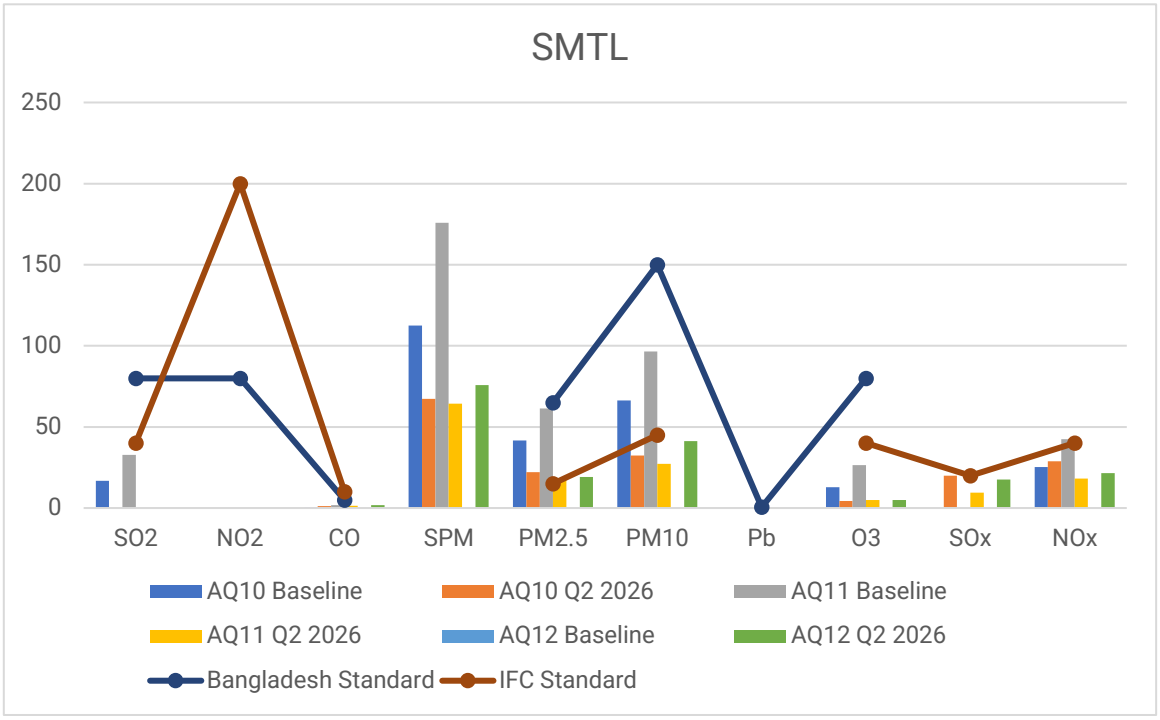


Package 3

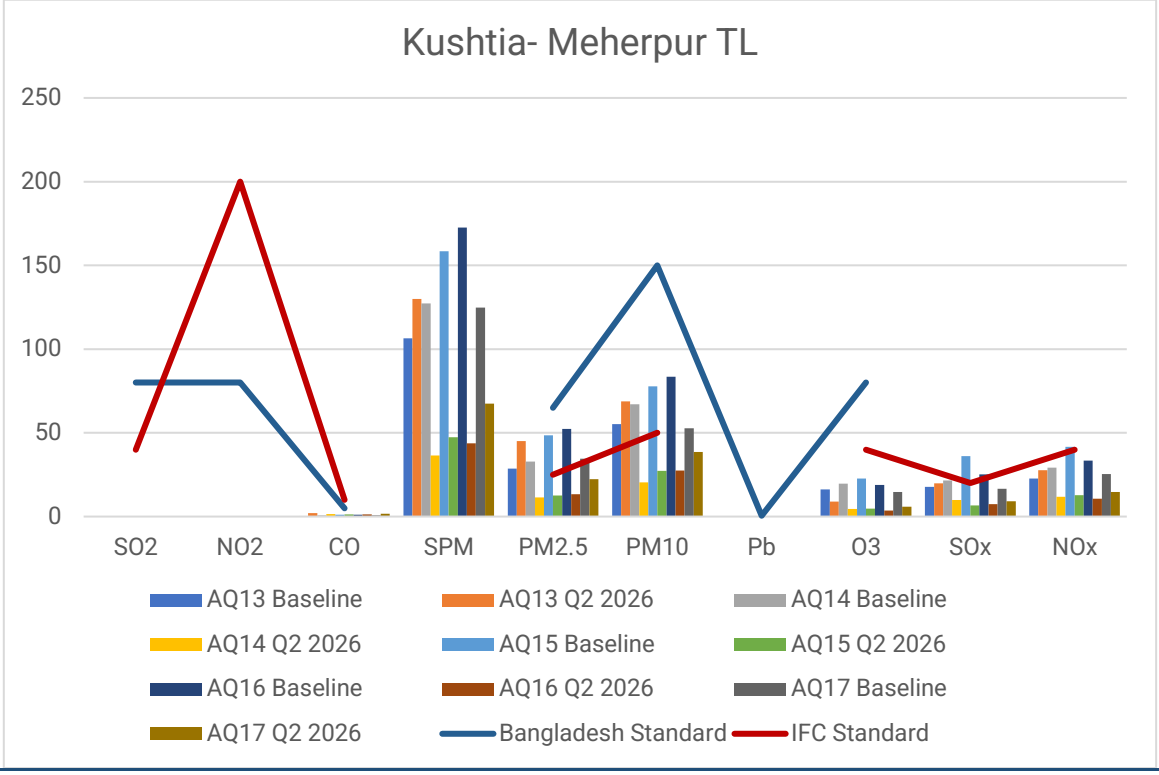
Satkhira- Rupsha TL



Satkhira- Manirampur TL

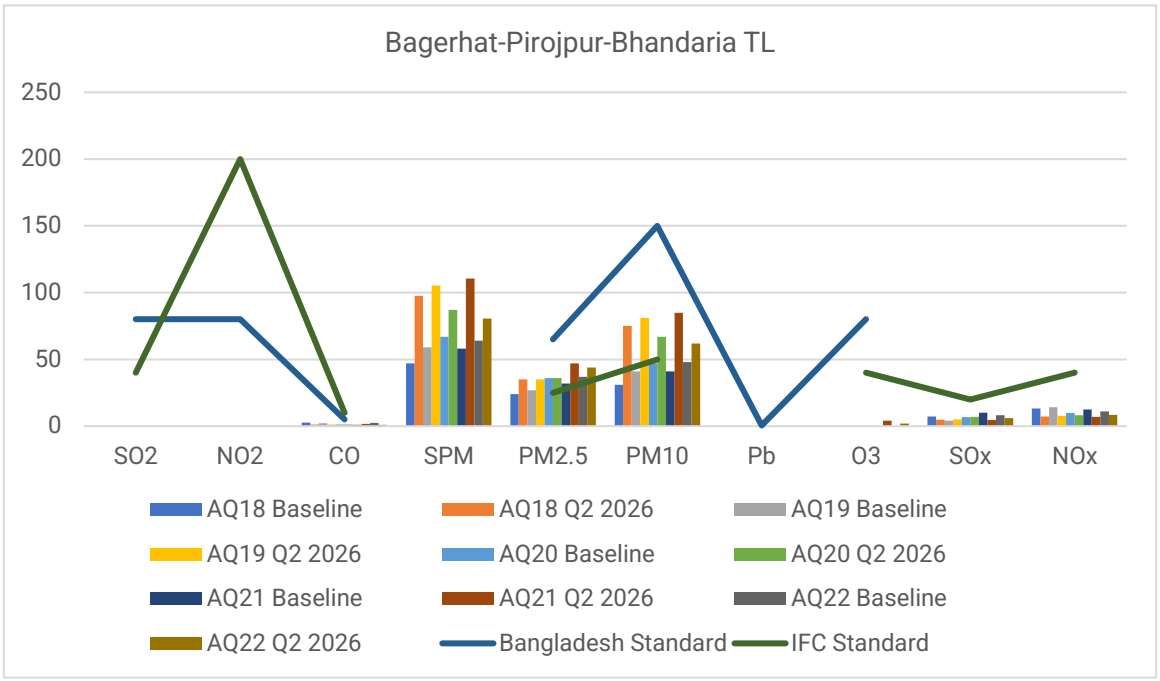


Kushtia- Meherpur TL

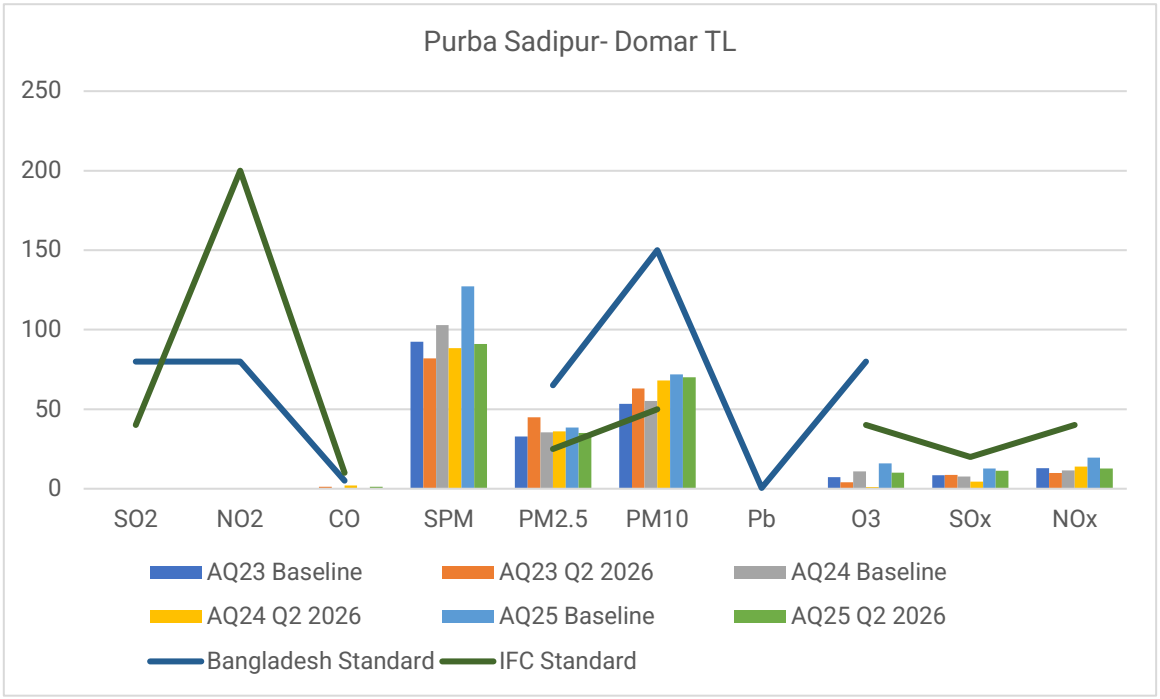

Kushtia- Meherpur TL
250
200
150
100
50
0
SO2
NO2
CO
SPM
PM2.5
PM10
Pb
O3
SOx
NOx
AQ13 Baseline
AQ13 Q2 2026
AQ14 Baseline
AQ14 Q2 2026
AQ15 Baseline
AQ15 Q2 2026
AQ16 Baseline
AQ16 Q2 2026
AQ17 Baseline
AQ17 Q2 2026
Bangladesh Standard
IFC Standard

Package 4

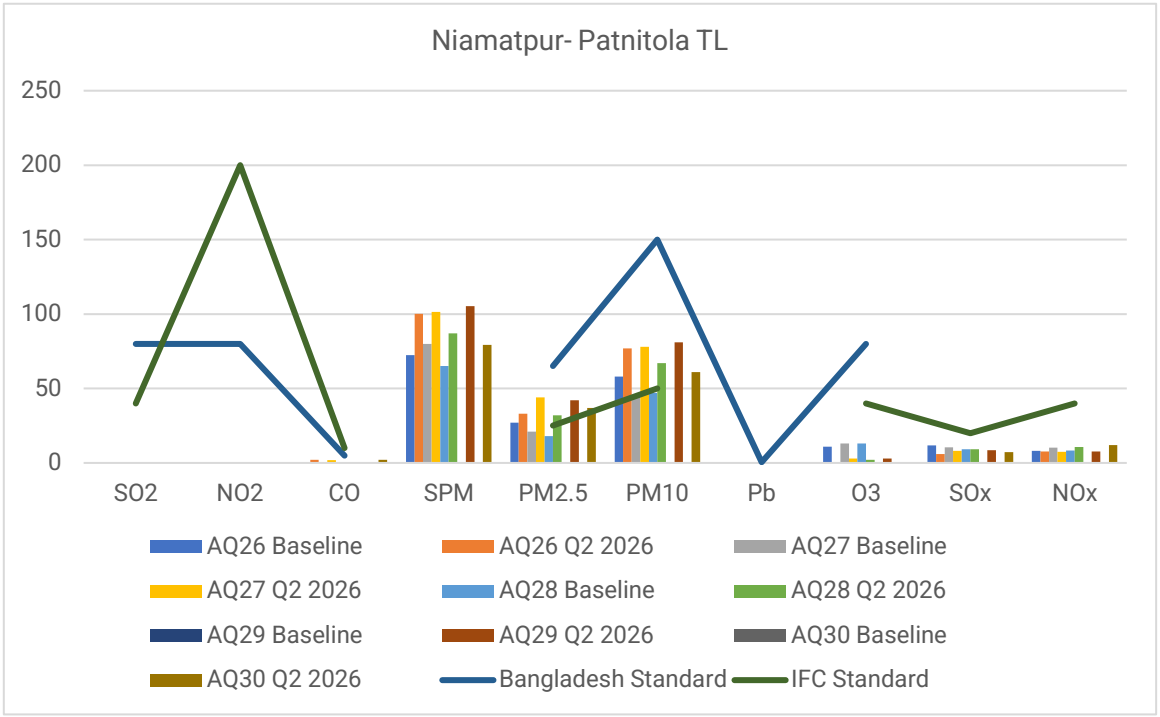
Bagerhat-Pirojpur-Bhandaria TL



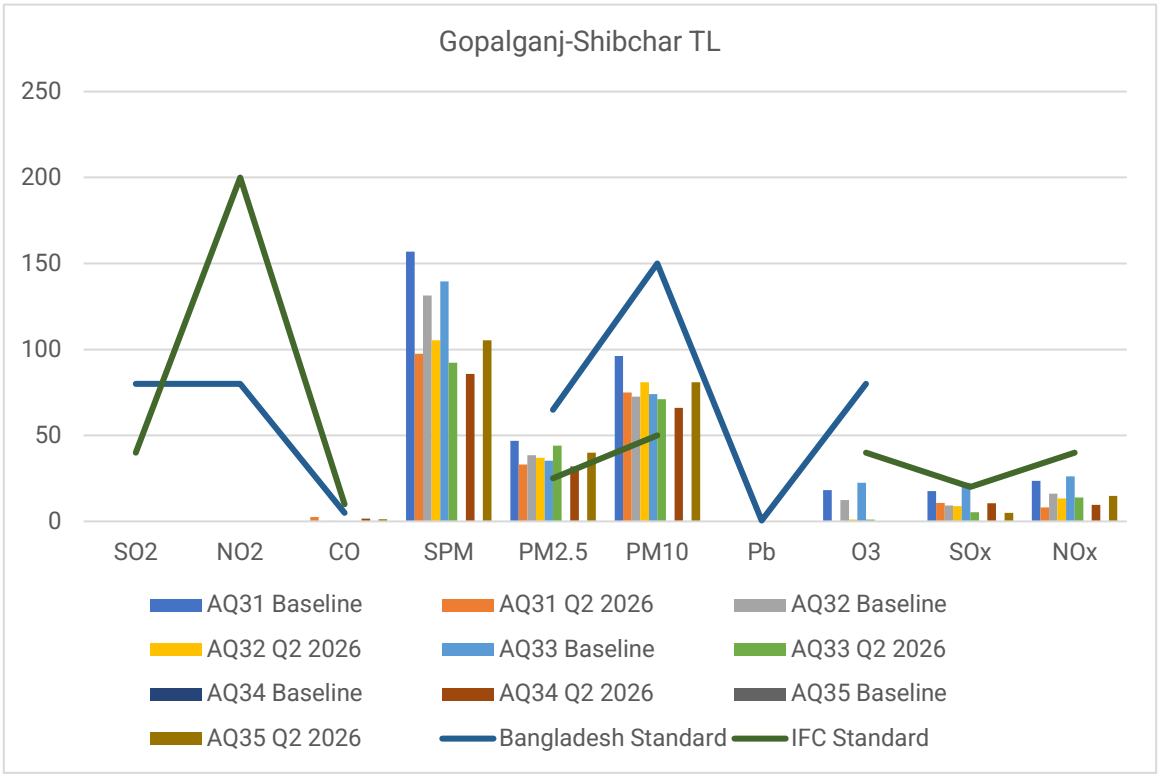
Purba Sadipur- Domar TL



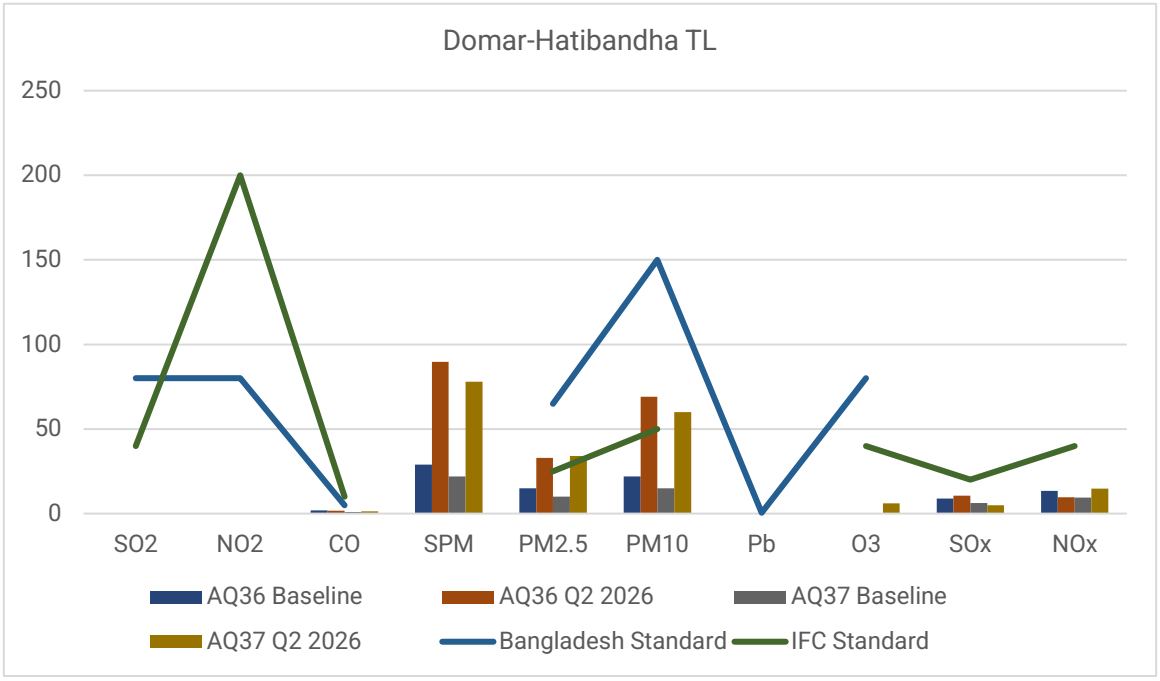
Niamatpur- Patnitola TL



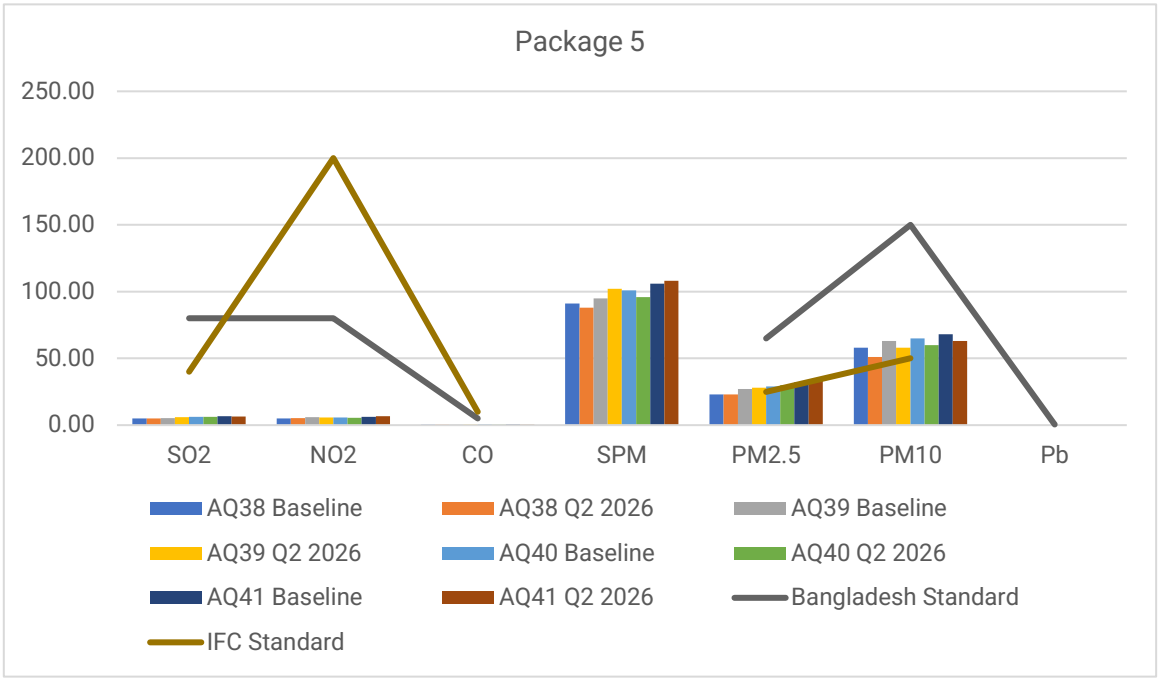
Gopalganj-Shibchar TL



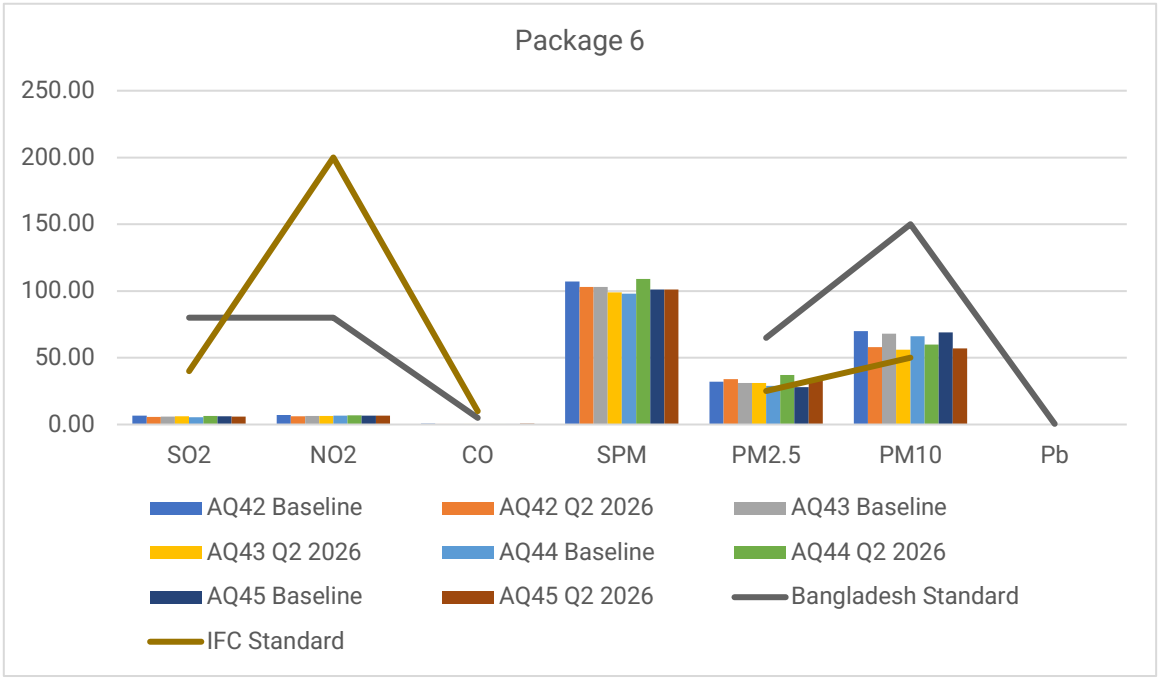
Domar-Hatibandha TL



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
AQ42 Baseline
AQ42 Q2 2026
AQ43 Baseline
AQ43 Q2 2026
AQ44 Baseline
AQ44 Q2 2026
AQ45 Baseline
AQ45 Q2 2026
Bangladesh Standard
IFC Standard

Package 7

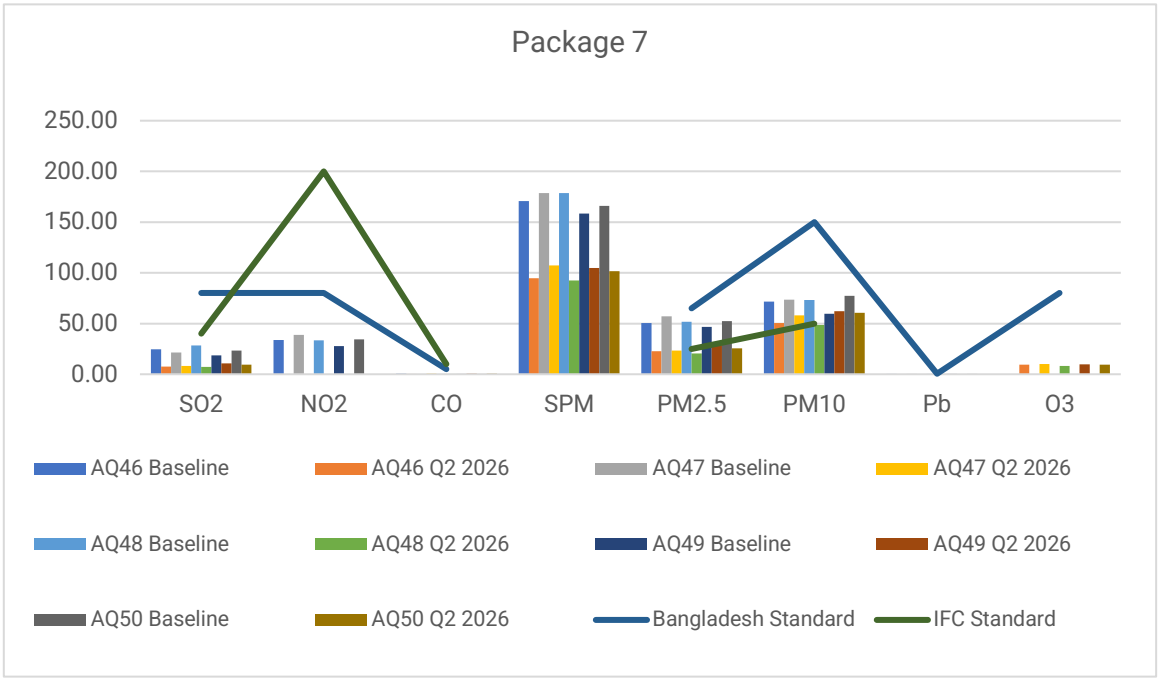

Package 7
250.00
200.00
150.00
100.00
50.00
0.00
SO2
NO2
CO
SPM
PM2.5
PM10
Pb
O3
AQ46 Baseline
AQ46 Q2 2026
AQ47 Baseline
AQ47 Q2 2026
AQ48 Baseline
AQ48 Q2 2026
AQ49 Baseline
AQ49 Q2 2026
AQ50 Baseline
AQ50 Q2 2026
Bangladesh Standard
IFC Standard

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

Sl. No.	Code	Period	Ambient Air Pollution Concentration									
			SO_2	NO_2	CO	SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx
			µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Package 1												
1.	AQ1	Baseline			0.40	87.00	36.00	44.00		30.00	40.4	46.9
		Q1 2026			1.14	79.85	24.43	37.37	BDL	3.68	9.56	14.74
2.	AQ2	Baseline			0.40	77.00	38.00	46.00		33.00	43	47.6
		Q1 2026			1.10	41.68	12.69	23.16	BDL	3.54	6.22	10.47
3.	AQ3	Baseline			0.40	82.00	37.00	53.00		37.00	45.6	44.3
		Q1 2026			1.09	51.35	13.24	25.03	BDL	2.94	6.76	10.11
4.	AQ4	Baseline			0.40	74.00	36.00	44.00		30.00	46.3	45.6
		Q1 2026			1.13	41.64	13.83	20.52	BDL	3.57	7.35	11.53
5.	AQ5	Baseline			0.40	75.00	38.00	45.00		32.00	41	45
		Q1 2026			1.36	70.74	20.02	31.25	BDL	2.88	15.68	17.64
Package 3												
Satkhira- Rupsha TL												
6.	AQ6	Baseline	27.5		1.21	144.70	55.30	82.60	BDL	21.80		36.50
		Q2 2026	-	-	1.53	49.17	17.34	28.49	BDL	5.36	16.01	17.32
7.	AQ8	Baseline	19.2		0.60	118.50	45.40	71.60	BDL	17.50		31.70
		Q2 2026	-	-	0.96	59.45	16.66	27.98	BDL	4.41	7.14	9.91
8.	AQ7	Baseline	13.5		0.28	104.80	39.80	58.30	BDL	15.10		22.80
		Q2 2026	-	-	0.93	37.32	13.92	23.46	BDL	3.99	6.18	8.65
9.	AQ9	Baseline	-	-								
		Q2 2026	-	-	0.86	56.32	16.65	30.15	BDL	4.03	11.17	13.73
Satkhira- Manirampur TL												
10.	AQ10	Baseline	16.7		0.40	112.40	41.60	66.30	BDL	12.90		25.30

Sl. No.	Code	Period	Ambient Air Pollution Concentration									
			SO_2	NO_2	CO	SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx
			µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
		Q2 2026	-	-	1.15	67.21	22.06	32.32	BDL	4.33	19.90	28.87
11.	AQ11	Baseline	32.8		1.81	175.80	61.40	96.50	BDL	26.40		42.50
		Q2 2026	-	-	1.34	64.29	17.91	27.32	BDL	4.89	9.45	18.16
12.	AQ12	Baseline	-	-								
		Q2 2026	-	-	1.69	75.81	19.12	41.25	BDL	5.01	17.55	21.54
Kushtia- Meherpur TL												
13.	AQ13	Baseline	-	-	0.30	106.50	28.60	55.20	BDL	16.30	17.80	22.70
		Q2 2026	-	-	1.97	129.94	45.01	68.87	BDL	8.87	19.89	27.64
14.	AQ14	Baseline	-	-	0.80	127.30	32.80	67.10	BDL	19.60	21.60	29.30
		Q2 2026	-	-	1.49	36.41	11.36	20.32	BDL	4.62	9.86	11.74
15.	AQ15	Baseline	-	-	1.10	158.40	48.50	77.80	BDL	22.70	36.10	41.60
		Q2 2026	-	-	1.30	47.28	12.63	27.22	BDL	4.78	6.64	12.67
16.	AQ16	Baseline	-	-	1.02	172.60	52.40	83.50	BDL	18.90	25.20	33.50
		Q2 2026	-	-	1.21	43.65	13.40	27.44	BDL	3.65	7.32	10.72
17.	AQ17	Baseline	-	-	0.70	124.70	34.60	52.70	BDL	14.70	16.60	25.40
		Q2 2026	-	-	1.68	67.38	22.34	38.56	BDL	5.81	9.12	14.61
Package 4												
Bagerhat-Pirojpur-Bhandaria TL												
18.	AQ18	Baseline	-	-	2.7	47	24	31	0		7.3	13.1
		Q2 2026	-	-	1.2	97.5	35	75	0	0	4.8	7.3
19.	AQ19	Baseline	-	-	2.1	59	27	41	0		4.2	14.2
		Q2 2026	-	-	1.2	105.3	35	81	0.003	0	5	7.8
20.	AQ20	Baseline	-	-	1.3	67	36	47	0		6.8	9.8
		Q2 2026	-	-	1.2	87.1	36	67	0	0	7	8.3
21.	AQ21	Baseline	-	-	1.1	58	32	41	0	-	10.1	12.6

Sl. No.	Code	Period	Ambient Air Pollution Concentration									
			SO_2	NO_2	CO	SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx
			µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
		Q2 2026	-	-	1.6	110.5	47	85	0.002	4	4.7	7.1
22.	AQ22	Baseline	-	-	2.4	64	37	48	0	-	8.3	11
		Q2 2026	-	-	0.9	80.6	44	62	0.002	2	6	8.5
Purba Sadipur- Domar TL												
23.	AQ23	Baseline	-	-	0.4	92.5	32.8	53.4	BDL	7.2	8.4	12.9
		Q2 2026	-	-	1.3	80.6	43	62	0.001	0	8.7	9.9
24.	AQ24	Baseline	-	-	0	102.8	35.4	55.1	BDL	10.9	7.6	11.6
		Q2 2026	-	-	0	84.5	44	65	0	5	4.5	14
25.	AQ25	Baseline	-	-	0.01	127.2	38.5	71.8	BDL	15.9	12.8	19.6
		Q2 2026	-	-	1.3	96.2	39	74	0	0	11.3	12.8
Niamatpur- Patnitola TL												
26.	AQ26	Baseline	-	-	0.00	72.40	27.00	58.00	0.01	11.00	11.80	8.10
		Q2 2026	-	-	2.10	100.10	33.00	77.00	0.00	0.00	5.90	7.70
27.	AQ27	Baseline	-	-	0.00	80.00	21.00	45.00	0.02	13.00	10.40	10.30
		Q2 2026	-	-	1.80	101.40	44.00	78.00	0.00	3.00	8.10	7.50
28.	AQ28	Baseline	-	-	0.00	65.00	18.00	47.00	0.01	13.00	9.10	8.30
		Q2 2026	-	-	0.00	87.10	32.00	67.00	0.00	2.00	9.20	10.80
29.	AQ29	Baseline	-	-								
		Q2 2026	-	-	0.00	105.30	42.00	81.00	0.00	3.00	8.50	7.70
30.	AQ30	Baseline	-	-								
		Q2 2026	-	-	2.00	79.30	37.00	61.00	0.00	0.00	7.30	11.90
Gopalganj-Shibchar TL												
31.	AQ31	Baseline	-	-	0.02	156.80	46.90	96.20	BDL	18.10	17.60	23.50
		Q2 2026	-	-	2.60	97.50	33.00	75.00	0.00	0.00	10.80	8.20
32.	AQ32	Baseline	-	-	0.01	131.40	38.40	72.50	BDL	12.50	9.20	16.10

Sl. No.	Code	Period	Ambient Air Pollution Concentration									
			SO_2	NO_2	CO	SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx
			µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
		Q2 2026	-	-	0.30	105.30	37.00	81.00	0.00	1.00	8.80	13.40
33.	AQ33	Baseline	-	-	0.01	139.50	35.30	74.10	BDL	22.40	22.50	26.20
		Q2 2026	-	-	0.00	92.30	44.00	71.00	0.00	1.00	5.30	13.90
34.	AQ34	Baseline	-	-								
		Q2 2026	-	-	1.70	85.80	32.00	66.00	0.00	0.00	10.50	9.70
35.	AQ35	Baseline	-	-								
		Q2 2026	-	-	1.30	105.30	40.00	81.00	0.00	0.00	5.00	14.80
Domar-Hatibandha TL												
36.	AQ36	Baseline	-	-	1.90	29.00	15.00	22.00	0.00	-	8.80	13.40
		Q2 2026	-	-	2.90	84.50	42.00	65.00	0.00	3.00	12.30	14.00
37.	AQ37	Baseline	-	-	0.90	22.00	10.00	15.00	0.00	-	6.20	9.50
		Q2 2026	-	-	1.50	91.00	42.00	70.00	0.00	5.00	8.30	7.70
Package 5												
400/230 kV GIS Substation at Kaliganj, Gazipur												
38.	AQ38	Baseline	4.90	5.10	0.46	91.00	23.00	58.00	BDL	-	-	-
		Q2 2026	5.10	5.30	0.49	88.00	23.00	51.00	BDL	-	-	-
39.	AQ39	Baseline	5.30	6.00	0.51	95.00	27.00	63.00	BDL	-	-	-
		Q2 2026	5.90	5.80	0.56	102.00	28.00	58.00	BDL	-	-	-
40.	AQ40	Baseline	6.20	5.70	0.63	101.00	29.00	65.00	BDL	-	-	-
		Q2 2026	6.20	5.60	0.58	96.00	30.00	60.00	BDL	-	-	-
41.	AQ41	Baseline	6.80	6.20	0.59	106.00	32.00	68.00	BDL	-	-	-
		Q2 2026	6.50	6.70	0.53	108.00	34.00	63.00	BDL	-	-	-
Package 6												
400/230/132 KV GIS Substation at Purbachal												
42.	AQ42	Baseline	6.70	7.20	0.59	107.00	32.00	70.00	BDL	-	-	-

Sl. No.	Code	Period	Ambient Air Pollution Concentration									
			SO_2	NO_2	CO	SPM	$PM_{2.5}$	PM_{10}	Pb	O_3	SOx	NOx
			µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
		Q2 2026	5.70	6.20	0.49	103.00	34.00	58.00	BDL	-	-	-
43.	AQ43	Baseline	5.90	6.30	0.48	103.00	31.00	68.00	BDL	-	-	-
		Q2 2026	6.10	6.50	0.47	99.00	31.00	56.00	BDL	-	-	-
44.	AQ44	Baseline	5.40	6.70	0.51	98.00	29.00	66.00	BDL	-	-	-
		Q2 2026	6.40	6.90	0.52	109.00	37.00	60.00	BDL	-	-	-
45.	AQ45	Baseline	6.20	6.60	0.53	101.00	28.00	69.00	BDL	-	-	-
		Q2 2026	5.90	6.60	0.55	101.00	33.00	57.00	BDL	-	-	-
Package 7												
46.	AQ46	Baseline	24.70	33.60	0.48	170.70	50.50	71.50	0.03	-	-	-
		Q2 2026	7.50		0.42	94.70	22.60	50.40	BDL	9.50		7.10
47.	AQ47	Baseline	21.40	38.80	0.41	178.60	57.20	73.50	0.04	-	-	-
		Q2 2026	8.30		0.63	107.20	23.40	58.20	BDL	10.20		5.90
48.	AQ48	Baseline	28.40	33.40	0.37	178.80	51.70	73.30	0.04	-	-	-
		Q2 2026	7.10		0.39	92.60	20.50	48.50	BDL	8.10		6.70
49.	AQ49	Baseline	18.60	27.90	0.18	158.50	46.70	59.50	0.01	-	-	-
		Q2 2026	10.70		0.69	104.80	28.70	62.30	BDL	9.90		14.30
50.	AQ50	Baseline	23.30	34.40	0.27	165.90	52.50	77.40	0.02	-	-	-
		Q2 2026	9.30		0.64	101.50	25.40	60.50	BDL	9.50		13.40
Bangladesh Standard[1]			**80**	**80**	**5**	**-**	**65**	**150**	**0.5**	**80**	**-**	**-**
****IFC EHS Standard[2]**			**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**

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

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

Source: Periodic Environmental Baseline Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 7)
Note: BDL= Below Detection Limit, NA= Not available

3.2 Noise Level Quality

3.2.1 Noise Level Monitoring Methods

44. This section identifies the status of the ambient noise level in Package 1, 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, 2025- 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[3]		IFC-WHO[4]	
		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.

45. 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

46. 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**.

47. **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, 3, 4, 5, 6 and 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	01.03.2026-03.03.2026	Mixed Area Area

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

[4] 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 3					
Satkhira- Rupsha TL					
6.	NL6	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	16.05.2026-22.05.2026	Mixed Zone
7.	NL7	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E		Mixed Zone
8.	NL8	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E		Mixed Zone
9.	NL9	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E		Silent Zone
Satkhira- Manirampur TL					
10.	NL10	Magura, Satkhira	22.741249 N, 89.091239 E	16.05.2026-22.05.2026	Mixed Zone
11.	NL11	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E		Mixed Zone
12.	NL12	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E		Residential Zone
Kushtia- Meherpur TL					
13.	NL13	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	16.05.2026-22.05.2026	Silent Zone
14.	NL14	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E		Residential Zone
15.	NL15	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E		Silent Zone
16.	NL16	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E		Mixed Zone
17.	NL17	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E		Silent Zone
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
18.	NL18	T-2/0	23°17'5.39"N	17.06.2026-21.06.2026	Mixed Area
			90°1'32.03"E		
19.	NL19	T-4/0	23°17'55.37"N 90°2'29.59"E		
20.	NL20	T-5/0	23°18'4.91"N 90°2'57.73"E		
21.	NL21	T-15/0	23°19'46.89"N 90°10'35.89"E		
22.	NL22	T-17/0	23°21'7.46"N 90°11'4.27"E		

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
Purba Sadipur- Domar TL					
23.	NL23	T-1/0	25°45'12.57"N 88°40'45.99"E	07.06.2026-11.06.2026	Mixed Area
24.	NL24	T-8/0	25°51'37.67"N 88°43'50.66"E		
25.	NL25	T-16/0	25°57'28.54"N 88°45'29.11"E		
Niamatpur- Patnitola TL					
26.	NL26	T-3/0	25°47'24.11"N 88°41'21.95"E	07.06.2026-11.06.2026	Mixed Area
27.	NL27	T-9/0	25°52'9.21"N 88°45'24.23"E		
28.	NL28	T-12/0	25°54'37.92"N 88°45'26.28"E		
29.	NL29	T-15/0	25°56'41.08"N 88°45'31.14"E		
30.	NL30	T-17/0	25°57'39.67"N 88°45'34.17"E		
Gopalganj-Shibchar TL					
31.	NL31	TT-2	23°21'16.19"N 90°11'1.90"E	07.06.2026-11.06.2026	Mixed Area
32.	NL32	T-17/0	23°21'7.46"N 90°11'4.27"E		
33.	NL33	T-15/0	23°19'46.89"N 90°10'35.89"E		
34.	NL34	T-8/0	23°19'18.52"N 90°4'39.57"E		
35.	NL35	T-2/0	23°17'5.39"N 90°1'32.03"E		
Domar-Hatibandha TL					
36.	NL36	T-16/0	25°57'28.54"N 88°45'29.11"E	07.06.2026-11.06.2026	Mixed Area
37.	NL37	T-20/0	26° 0'26.82"N 88°45'48.31"E		
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
38.	NL38	In front of Hafej Sheikh's House	23.968853 N; 90.549165 E	02.03.2026-03.03.2026	Residential Area
39.	NL39	Located Near Nolir Bridge	23.963585 N; 90.549122 E		Mixed
40.	NL40	In front of Mamun Mia's House	23.965680 N; 90.554108 E		Residential Area
41.	NL41	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					
42.	NL42	In front of Dulal Mia's house	23.864745 N; 90.475689 E	17.02.2026-18.02.2026	Mixed

Sl. No.	Code	Location	GPS Coordinates	Sampling Date	Category
43.	NL43	In front of Dipak Chakraborty's Shop	23.865882 N; 90.475720 E		Mixed
44.	NL44	In front of Badal Mia's house	23.861849 N; 90.476507 E		Residential Area
45.	NL45	In front of Mohadev Karmakar's house	23.867743 N; 90.476149 E		Residential Area
Package 7					
46.	NL46	Near 132/33 kV GIS substation at Phultola	22°55'20.69"N 89°29'17.39"E	03.03.2026 - 05.03.2026	Mixed
47.	NL47	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.62"N 89°37'4.35"E		Mixed
48.	NL48	Near 132/33 kV GIS substation at Maheshpur	23°47'28.21"N 88°40'41.77"E		Mixed
49.	NL49	Near 132/33 kV GIS substation at Meherpur	23°20'39.31"N 88°55'21.71"E		Mixed
50.	NL50	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 Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

3.2.3 Analysis Results

48. 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.

49. Ambient noise monitoring for Package 1 was conducted at NL1–NL5 during the baseline and Q1 2026 periods. The Q1 2026 results indicate that daytime noise levels (Leqday) ranged from 46.66–57.44 dB(A), while nighttime noise levels (Leqnight) ranged from 38.41–43.29 dB(A). At NL1 (Mixed Area), the daytime noise level of 57.44 dB(A) exceeded the IFC/WHO guideline value of 55 dB(A), while the nighttime level remained within the guideline value of 45 dB(A). At NL2 and NL3 (Silent Areas), both daytime and nighttime levels remained within the applicable IFC/WHO guideline values of 55 and 45 dB(A), respectively. At NL4 (Mixed Area), both daytime and nighttime levels complied with the applicable IFC/WHO guidelines. At NL5 (Residential Area), the daytime noise level of 54.70 dB(A) remained within the IFC/WHO guideline value of 55 dB(A), while the nighttime level of 42.89 dB(A) also complied with the 45 dB(A) guideline. All Q1 2026 results remained within the applicable Bangladesh standards for the respective area categories.

50. Ambient noise monitoring for Package-3 was conducted at NL6–NL17 during the baseline and Q2 2026 periods. The recorded daytime and nighttime noise levels ranged from 44.35–64.45 dB(A) and 37.87–50.10 dB(A), respectively. The highest daytime noise level of 64.45 dB(A) was recorded at NL10, exceeding both the Bangladesh standard for mixed areas (60 dB(A)) and the IFC/WHO guideline (55 dB(A)). In addition, daytime noise levels at NL6 (57.45 dB(A)) and NL8 (57.61 dB(A)) exceeded the IFC/WHO guideline for mixed areas, while the nighttime noise level at NL6 (50.10 dB(A)) slightly exceeded both the Bangladesh standard (50 dB(A)) and the IFC/WHO guideline (45 dB(A)). All remaining monitoring locations complied with the applicable standards. Overall, the observed exceedances were localized and temporary, reflecting construction-related activities within the project corridor.

51. Ambient noise monitoring for Package-4 was conducted at NL18–NL37 during the baseline and Q2 2026 periods. The recorded daytime and nighttime noise levels ranged from 49.30–57.40 dB(A) and 37.04–44.91 dB(A), respectively. All monitored nighttime noise levels complied with both the Bangladesh Noise Pollution (Control) Rules, 2025 and the IFC/WHO guideline values. Daytime noise levels remained within the Bangladesh standards at all monitoring locations; however, marginal exceedances of the IFC/WHO daytime guideline (55 dB(A)) were observed at NL21 (55.80 dB(A)), NL23 (56.20 dB(A)), NL29 (55.70 dB(A)), NL30 (56.80 dB(A)), NL32 (57.40 dB(A)), NL33 (55.60 dB(A)), and NL35 (56.60 dB(A)). Overall, ambient noise levels remained compliant with the national standards, and the IFC exceedances were minor and associated with temporary construction activities.

52. Ambient noise monitoring for Package-5 was conducted at NL38–NL41 during the baseline and Q2 2026 periods. The recorded daytime and nighttime noise levels ranged from 51.50–53.70 dB(A) and 33.90–40.51 dB(A), respectively. All monitoring locations complied with both the Bangladesh Noise Pollution (Control) Rules, 2025 and the IFC/WHO guideline values for their respective land-use categories. No exceedance of the applicable noise standards was observed, indicating that construction activities at the Kaliganj GIS Substation did not generate significant noise impacts during the reporting period.

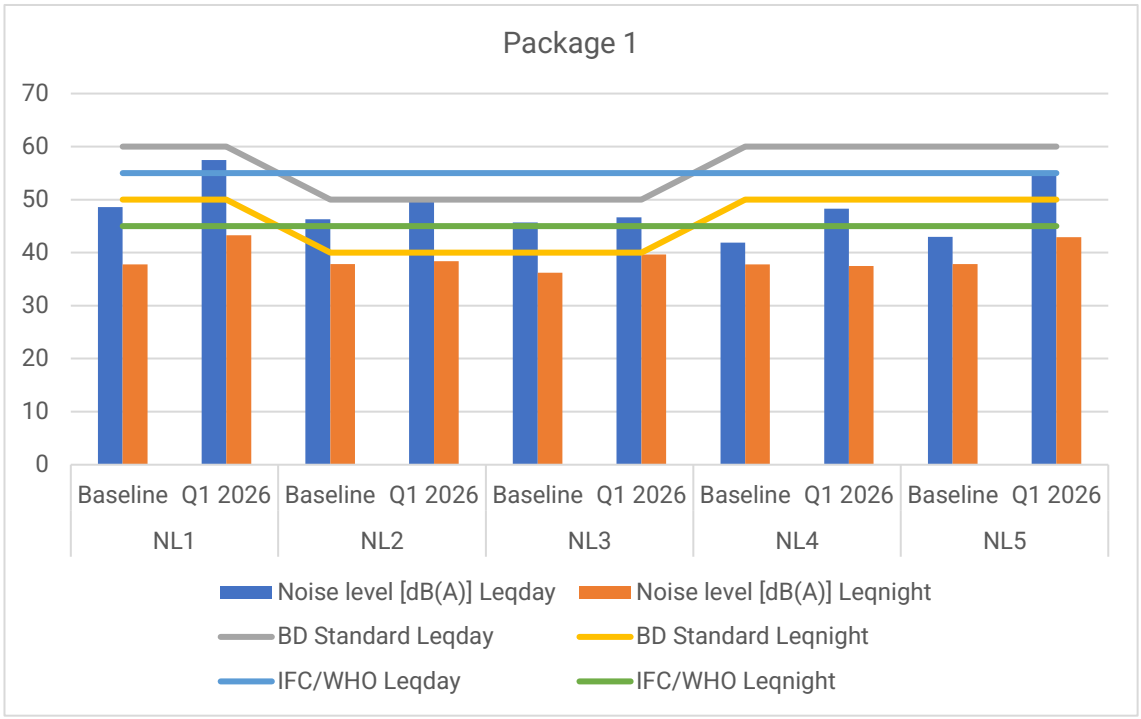
53. Ambient noise monitoring for Package-6 was conducted at NL42–NL45 during the baseline and Q2 2026 periods. The recorded daytime and nighttime noise levels ranged from 47.53–55.14 dB(A) and 36.94–46.27 dB(A), respectively. All monitoring locations complied with the Bangladesh Noise Pollution (Control) Rules, 2025. A slight exceedance of the IFC/WHO nighttime guideline (45 dB(A)) was observed at NL42 (46.27 dB(A)), while all remaining monitoring locations complied with the applicable IFC/WHO guideline values. Overall, ambient noise conditions remained satisfactory during the reporting period.

54. Ambient noise monitoring for Package-7 was conducted at NL46–NL50 during the baseline and Q2 2026 periods. The recorded daytime and nighttime noise levels ranged from 49.65–55.37 dB(A) and 36.32–40.41 dB(A), respectively. All monitoring locations complied with the Bangladesh Noise Pollution (Control) Rules, 2025. The IFC/WHO daytime guideline (55 dB(A)) was marginally exceeded at NL48 (55.37 dB(A)), while all remaining monitoring locations complied with the applicable guideline values. Overall, ambient noise levels remained within acceptable limits, indicating that construction activities under Package-7 did not result in significant noise impacts during the reporting period.

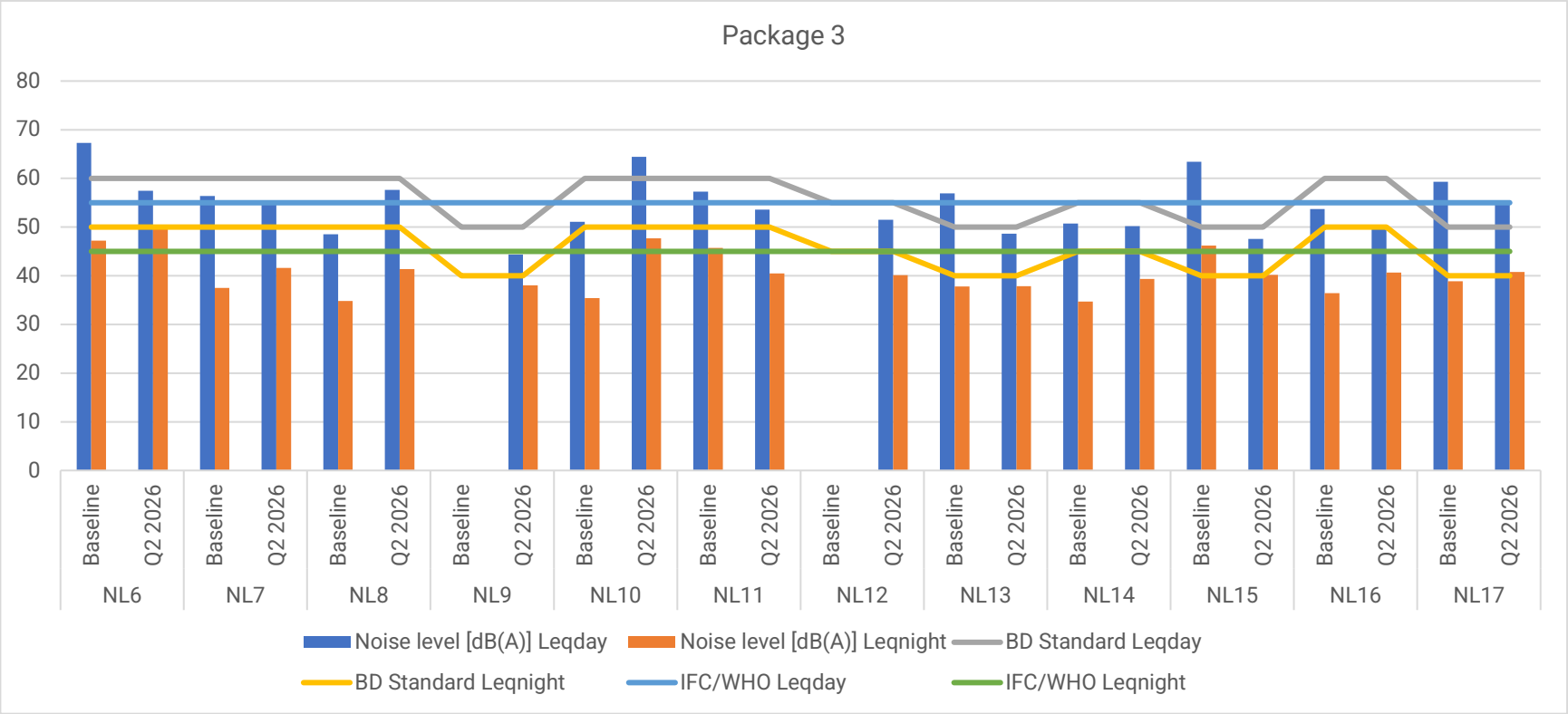
55. Monitoring photographs and lab sheets are attached in Appendix 32 and Appendix 33

Figure 3-2: Noise Monitoring Level of Package 1, 3, 4, 5, 6 and 7 locations

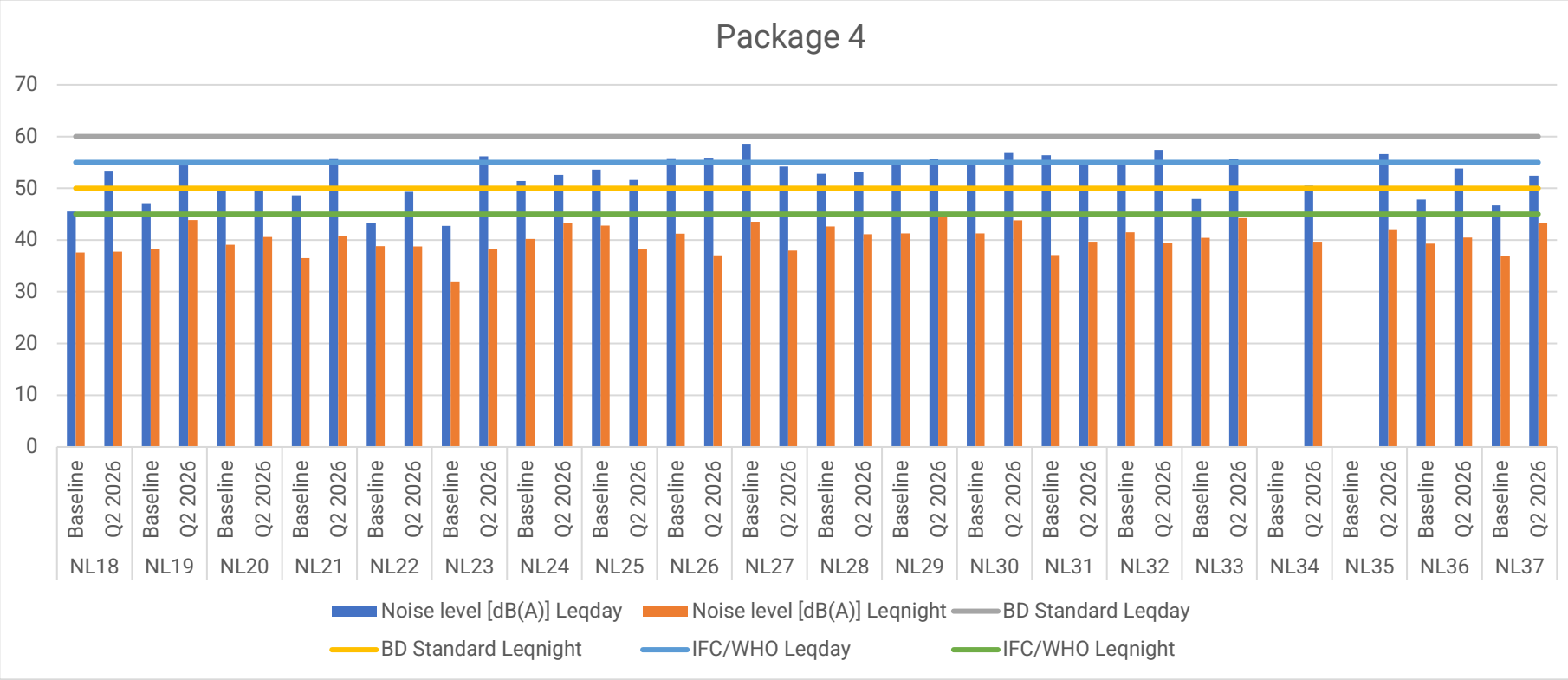
Package 1



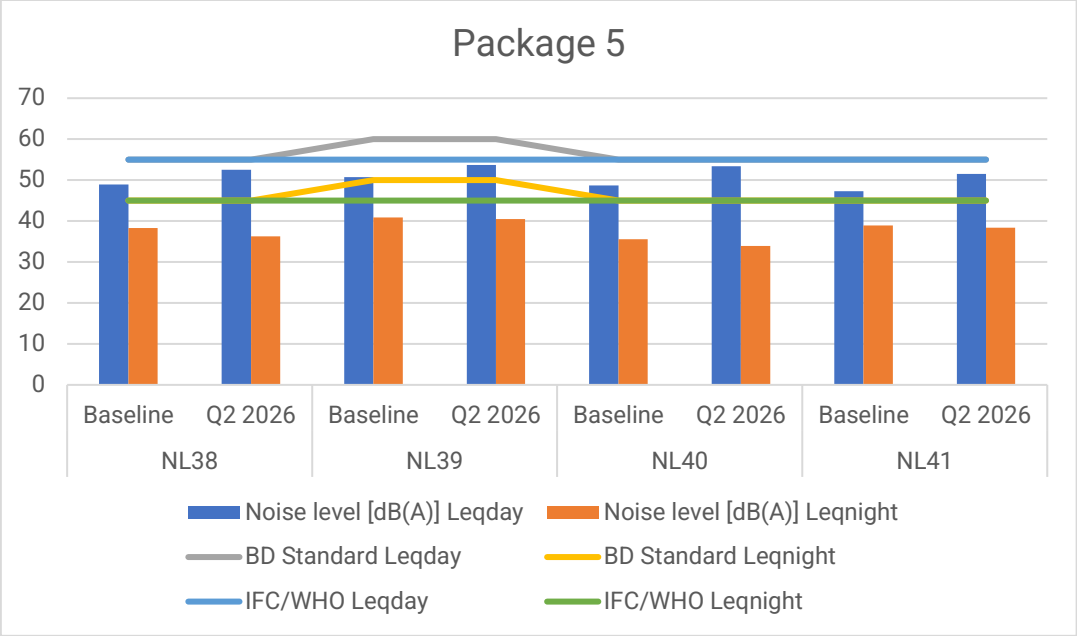
Package 3



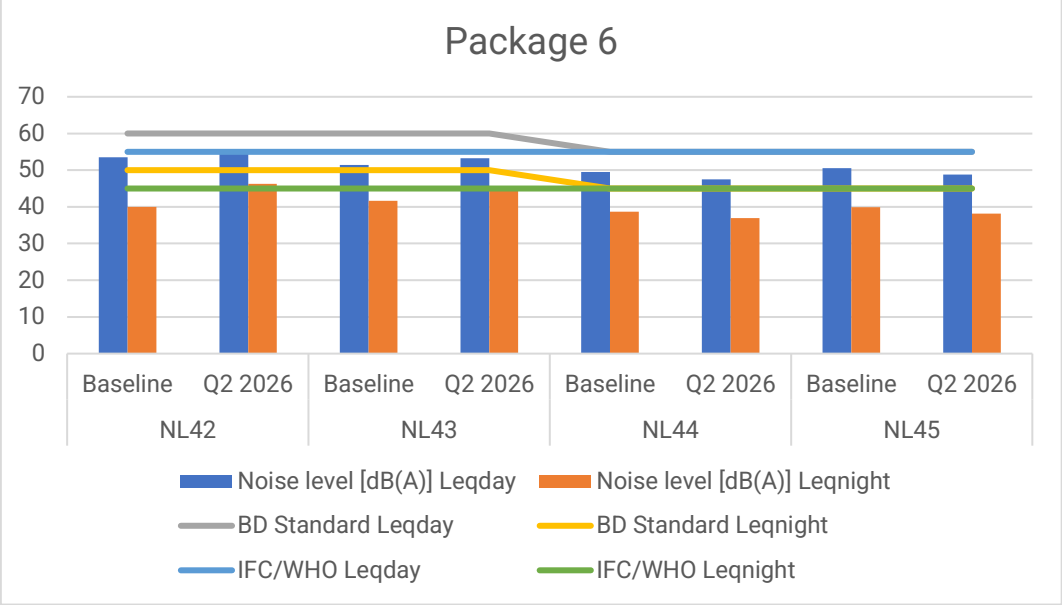
Package 4


Package 4
70
60
50
40
30
20
10
0
Baseline
Q2 2026
NL18
NL19
NL20
NL21
NL22
NL23
NL24
NL25
NL26
NL27
NL28
NL29
NL30
NL31
NL32
NL33
NL34
NL35
NL36
NL37
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

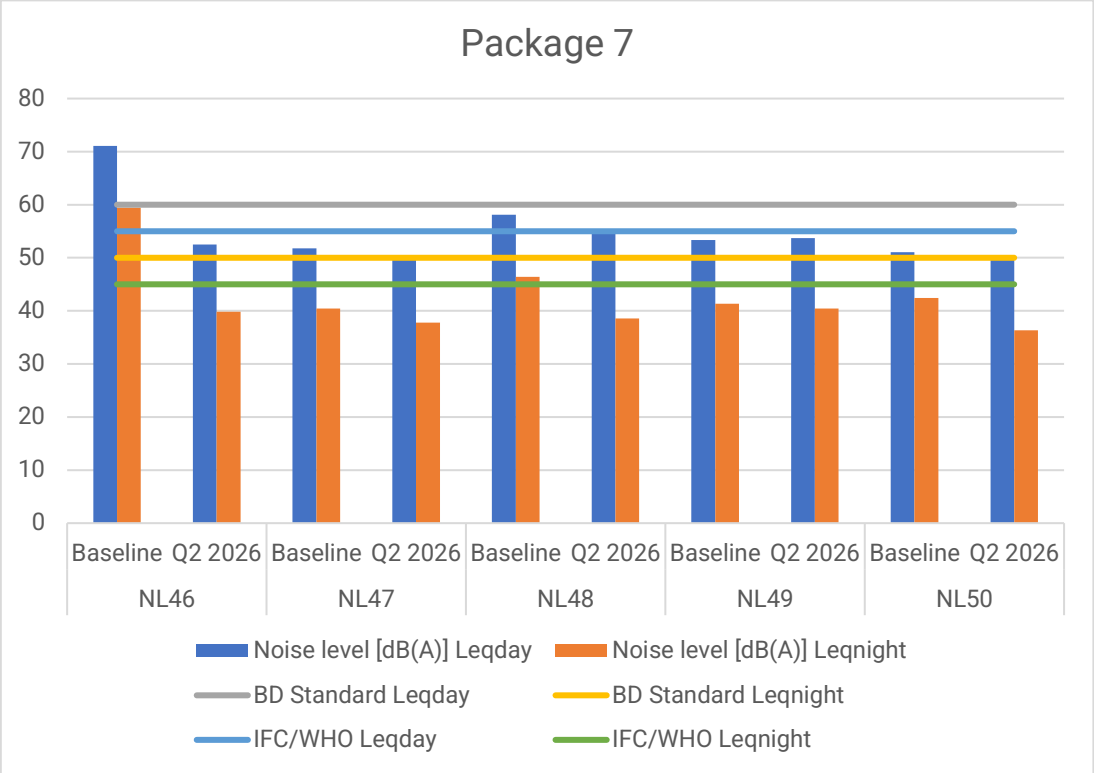

Package 7
80
70
60
50
40
30
20
10
0
Baseline Q2 2026
NL46
Baseline Q2 2026
NL47
Baseline Q2 2026
NL48
Baseline Q2 2026
NL49
Baseline Q2 2026
NL50
Noise level [dB(A)] Leqday
Noise level [dB(A)] Leqnight
BD Standard Leqday
BD Standard Leqnight
IFC/WHO Leqday
IFC/WHO Leqnight

Table 3-5: Noise Monitoring Level of Package 1, 3, 4, 5, 6 and 7 locations

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[5]		IFC/WHO Standard[6]		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
		Q1 2026	57.44	43.29	60	50	55	45	Mixed Area
2.	NL2	Baseline	46.3	37.84	50	40	55	45	Silent Area
		Q1 2026	49.94	38.41	50	40	55	45	Silent Area
3.	NL3	Baseline	45.71	36.23	50	40	55	45	Silent Area
		Q1 2026	46.66	39.68	50	40	55	45	Silent Area
4.	NL4	Baseline	41.86	37.77	60	50	55	45	Mixed Area
		Q1 2026	48.29	37.47	60	50	55	45	Mixed Area
5.	NL5	Baseline	42.95	37.86	60	50	55	45	Residential Area
		Q1 2026	54.7	42.89	60	50	55	45	Residential Area
Package 3									
Satkhira- Rupsha TL									
6.	NL6	Baseline	67.3	47.2	60	50	55	45	Mixed Area
		Q2 2026	57.45	50.1	60	50	55	45	Mixed Area
7.	NL7	Baseline	56.4	37.5	60	50	55	45	Mixed Area
		Q2 2026	55.24	41.61	60	50	55	45	Mixed Area
8.	NL8	Baseline	48.5	34.8	60	50	55	45	Mixed Area
		Q2 2026	57.61	41.35	60	50	55	45	Mixed Area
9.	NL9	Baseline			50	40	55	45	Silent Area
		Q2 2026	44.35	38.06	50	40	55	45	Silent Area
Satkhira- Manirampur TL									

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

[6] 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[5]		IFC/WHO Standard[6]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
10.	NL10	Baseline	51.1	35.4	60	50	55	45	Mixed Area
		Q2 2026	64.45	47.71	60	50	55	45	Mixed Area
11.	NL11	Baseline	57.3	45.7	60	50	55	45	Mixed Area
		Q2 2026	53.56	40.47	60	50	55	45	Mixed Area
12.	NL12	Baseline			55	45	55	45	Residential Area
		Q2 2026	51.49	40.1	55	45	55	45	Residential Area
Kushtia- Meherpur TL									
13.	NL13	Baseline	56.9	37.8	50	40	55	45	Silent Area
		Q2 2026	48.63	37.87	50	40	55	45	Silent Area
14.	NL14	Baseline	50.7	34.7	55	45	55	45	Residential Area
		Q2 2026	50.17	39.35	55	45	55	45	Residential Area
15.	NL15	Baseline	63.4	46.2	50	40	55	45	Silent Area
		Q2 2026	47.54	40.2	50	40	55	45	Silent Area
16.	NL16	Baseline	53.7	36.4	60	50	55	45	Mixed Area
		Q2 2026	49.58	40.68	60	50	55	45	Mixed Area
17.	NL17	Baseline	59.3	38.9	50	40	55	45	Silent Area
		Q2 2026	54.78	40.78	50	40	55	45	Silent Area
Package 4									
Bagerhat-Pirojpur-Bhandaria TL									
18.	NL18	Baseline	45.5	37.6	60	50	55	45	Mixed Area
		Q2 2026	53.4	37.76	60	50	55	45	Mixed Area
19.	NL19	Baseline	47.1	38.2	60	50	55	45	Mixed Area
		Q2 2026	54.4	43.87	60	50	55	45	Mixed Area
20.	NL20	Baseline	49.4	39.1	60	50	55	45	Mixed Area
		Q2 2026	50	40.57	60	50	55	45	Mixed Area
21.	NL21	Baseline	48.6	36.5	60	50	55	45	Mixed Area
		Q2 2026	55.8	40.84	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[5]		IFC/WHO Standard[6]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
22.	NL22	Baseline	43.3	38.8	60	50	55	45	Mixed Area
		Q2 2026	49.3	38.75	60	50	55	45	Mixed Area
Purba Sadipur- Domar TL									
23.	NL23	Baseline	42.7	32	60	50	55	45	Mixed Area
		Q2 2026	56.2	38.33	60	50	55	45	Mixed Area
24.	NL24	Baseline	51.4	40.2	60	50	55	45	Mixed Area
		Q2 2026	52.6	43.31	60	50	55	45	Mixed Area
25.	NL25	Baseline	53.6	42.8	60	50	55	45	Mixed Area
		Q2 2026	51.6	38.15	60	50	55	45	Mixed Area
Niamatpur- Patnitola TL									
26.	NL26	Baseline	55.8	41.2	60	50	55	45	Mixed Area
		Q2 2026	55.9	37.04	60	50	55	45	Mixed Area
27.	NL27	Baseline	58.6	43.5	60	50	55	45	Mixed Area
		Q2 2026	54.2	37.93	60	50	55	45	Mixed Area
28.	NL28	Baseline	52.8	42.6	60	50	55	45	Mixed Area
		Q2 2026	53.1	41.12	60	50	55	45	Mixed Area
29.	NL29	Baseline	55.2	41.3	60	50	55	45	Mixed Area
		Q2 2026	55.7	44.91	60	50	55	45	Mixed Area
30.	NL30	Baseline	54.6	41.3	60	50	55	45	Mixed Area
		Q2 2026	56.8	43.79	60	50	55	45	Mixed Area
Gopalganj-Shibchar TL									
31.	NL31	Baseline	56.4	37.1	60	50	55	45	Mixed Area
		Q2 2026	54.8	39.65	60	50	55	45	Mixed Area
32.	NL32	Baseline	54.7	41.5	60	50	55	45	Mixed Area
		Q2 2026	57.4	39.46	60	50	55	45	Mixed Area
33.	NL33	Baseline	47.9	40.4	60	50	55	45	Mixed Area
		Q2 2026	55.6	44.23	60	50	55	45	Mixed Area

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[5]		IFC/WHO Standard[6]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
34.	NL34	Baseline			60	50	55	45	Mixed Area
		Q2 2026	50.5	39.67	60	50	55	45	Mixed Area
35.	NL35	Baseline			60	50	55	45	Mixed Area
		Q2 2026	56.6	42.06	60	50	55	45	Mixed Area
Domar-Hatibandha TL									
36.	NL36	Baseline	47.8	39.3	60	50	55	45	Mixed Area
		Q2 2026	53.8	40.46	60	50	55	45	Mixed Area
37.	NL37	Baseline	46.7	36.9	60	50	55	45	Mixed Area
		Q2 2026	52.4	43.29	60	50	55	45	Mixed Area
Package 5									
400/230 kV GIS Substation at Kaliganj, Gazipur									
38.	NL38	Baseline	48.9	38.3	55	45	55	45	Residential Area
		Q2 2026	52.5	36.3	55	45	55	45	
39.	NL39	Baseline	50.71	40.88	60	50	55	45	Mixed Area
		Q2 2026	53.7	40.51	60	50	55	45	
40.	NL40	Baseline	48.7	35.6	55	45	55	45	Residential Area
		Q2 2026	53.4	33.9	55	45	55	45	
41.	NL41	Baseline	47.3	38.9	55	45	55	45	Residential Area
		Q2 2026	51.5	38.4	55	45	55	45	
Package 6									
400/230/132 KV GIS Substation at Purbachal									
42.	NL42	Baseline	53.52	39.95	60	50	55	45	Mixed Area
		Q2 2026	55.14	46.27	60	50	55	45	
43.	NL43	Baseline	51.39	41.66	60	50	55	45	Mixed Area
		Q2 2026	53.27	44.35	60	50	55	45	
44.	NL44	Baseline	49.47	38.71	55	45	55	45	Residential Area
		Q2 2026	47.53	36.94	55	45	55	45	

Sl. No.	Code	Period	Noise level [dB(A)]		Bangladesh Standard[5]		IFC/WHO Standard[6]		Category of Area
			Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	Leq_{day}	Leq_{night}	
45.	NL45	Baseline	50.54	39.92	55	45	55	45	Residential Area
		Q2 2026	48.83	38.12	55	45	55	45	
Package 7									
46.	NL46	Baseline	71.08	59.41	60	50	55	45	Mixed Area
		Q2 2026	52.48	39.83	60	50	55	45	
47.	NL47	Baseline	51.8	40.41	60	50	55	45	Mixed Area
		Q2 2026	50.23	37.81	60	50	55	45	
48.	NL48	Baseline	58.08	46.41	60	50	55	45	Mixed Area
		Q2 2026	55.37	38.55	60	50	55	45	
49.	NL49	Baseline	53.32	41.34	60	50	55	45	Mixed Area
		Q2 2026	53.72	40.41	60	50	55	45	
50.	NL50	Baseline	51.08	42.41	60	50	55	45	Mixed Area
		Q2 2026	49.65	36.32	60	50	55	45	

Source: Periodic Environmental Baseline Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

3.3 Water Quality

3.3.1 Surface Water

3.3.1.1 Surface Water Sampling Methods

56. 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.

57. 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.

58. 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].

59. 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

60. 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, 3, 4, 5, 6 and 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	01.03.2026- 03.03.2026
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 3					
Satkhira- Rupsha TL					

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
6.	SW6	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	Pond	16.05.2026-22.05.2026
7.	SW7	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	Canal	
8.	SW8	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	Pond	
9.	SW9	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	Pond	
Satkhira- Manirampur TL					
10.	SW10	Magura, Satkhira	22.741249 N, 89.091239 E	Pond	16.05.2026-22.05.2026
11.	SW11	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	Pond	
12.	SW12	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	Canal	
Kushtia- Meherpur TL					
13.	SW13	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	Canal	16.05.2026-22.05.2026
14.	SW14	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	Pond	
15.	SW15	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	Pond	
16.	SW16	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	Pond	
17.	SW17	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	Canal	
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
18.	SW18	T-2/4	22°38’18.04”N 89°49’12.79”E	Khal	
Purba Sadipur- Domar TL					
19.	SW19	AP-12	25°54’39”N 88°45’25”E	Pond	
Niamatpur- Patnitola TL					
20.	SW20	Chatara Bazar, Niamatpur	24°53’37.28”N 88°38’42.44”E	Pond	
Gopalganj-Shibchar TL					
21.	SW21	Near AP-01	23°16’29.41”N 90° 00’49.72”E	Cannel	
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
22.	SW22	Nolir Khal	23.966951 N; 90.552715 E	Canal	02.03.2026-03.03.2026
23.	SW23	Nolir Khal	23.965599 N; 90.551005 E		

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
24.	SW24	Nolir Khal	23.966207 N; 90.549402 E		
25.	SW25	Nolir Khal	23.966470 N; 90.548220 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
26.	SW26	Khal Beside Dulal, Mia's	23.864318 N; 90.475926 E	Canal	17.02.2026-18.02.2026
27.	SW27	Tongi Khal	23.863404 N; 90.474864 E		
28.	SW28	Tongi Khal	23.862593 N; 90.476197 E		
29.	SW29	Tongi Khal	23.862223 N; 90.475782 E		
Package 7					
30.	SW30	Near 132/33 kV GIS substation at Phultola	22°55'29.16"N 89°29'9.87"E	Pond	03.03.2026 - 05.03.2026
31.	SW31	Near 230/132/33 kV GIS substation at Rupsha	22°46'12.99"N 89°36'38.13"E	River	
32.	SW32	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E	Canal	
33.	SW33	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E	Pond	
34.	SW34	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 Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

3.3.1.3 Result Analysis

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

62. Surface water quality monitoring was conducted at representative ponds and canals adjacent to the project corridors and substation sites during Jan- Jun 2026. 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.

63. Surface water quality monitoring for Package-1 was conducted at SW1–SW5 during the baseline and Q2 2026 periods. The monitoring results indicate that pH (7.3–7.8) remained within the Bangladesh standard (6.5–8.5). However, BOD (9.0–17.2 mg/L) exceeded the standard value (≤6 mg/L) at all monitoring locations. Similarly, COD ranged from 40–90 mg/L, with SW4 (90 mg/L) exceeding the Bangladesh standard of 50 mg/L. Dissolved oxygen (DO) ranged from 3.3–5.4 mg/L, with SW2 (4.9 mg/L), SW4 (3.3 mg/L), and SW5 (4.2 mg/L) falling below the minimum standard of 5 mg/L. Total dissolved solids (TDS) ranged from 130–390 mg/L, remaining well within the standard of 1,000 mg/L. Overall, the monitoring results indicate localized deterioration of surface water quality at several locations, particularly at SW4, mainly reflected by elevated organic pollution and reduced dissolved oxygen.

64. Surface water quality monitoring for Package 3 was conducted at SW6–SW17 during the baseline and Q2 2026 periods. The monitoring results indicate that pH (7.3–8.1) remained within the Bangladesh standard (6.5–8.5). BOD concentrations ranged from 3.14–8.84 mg/L, with exceedances recorded at SW9, SW10, SW12, and SW16. COD ranged from 4–72 mg/L, with SW14 (72 mg/L) exceeding the Bangladesh standard (≤50 mg/L). DO ranged from 3.96–6.20 mg/L, with values below the standard (≥5 mg/L) at SW6–SW11 and SW13–SW15. TDS ranged from 160–3,350 mg/L, with SW7 (3,350 mg/L) exceeding the Bangladesh standard (1,000 mg/L). Total coliform counts (193–862 CFU/100 mL) indicated microbial contamination at several locations, while TSS (14–158 mg/L) and turbidity (6.4–114 NTU) showed localized variations. Overall, the surface water quality remained generally satisfactory; however, localized exceedances of BOD, COD, TDS, and low DO were observed at a few monitoring locations.

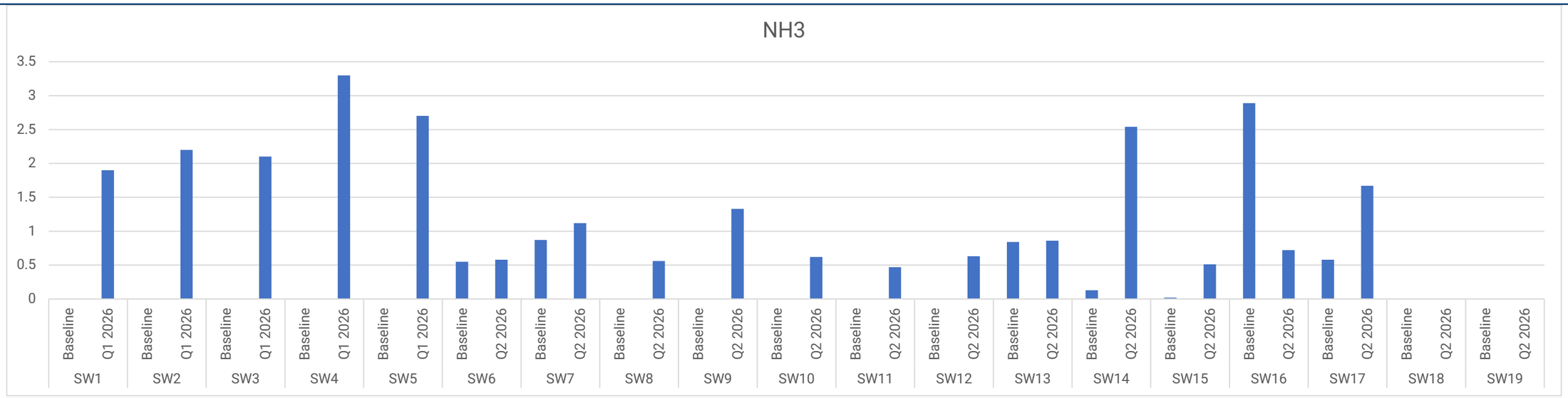
65. Surface water quality monitoring for Package 4 was conducted at SW18–SW21 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.2–7.5, remaining within the Bangladesh standard (6.5–8.5). BOD concentrations ranged from 6.0–9.3 mg/L, with exceedances observed at all monitoring locations compared to the Bangladesh standard (≤6 mg/L). COD ranged from 28–44 mg/L, remaining within the Bangladesh standard (≤50 mg/L). DO ranged from 4.15–4.70 mg/L, which was below the Bangladesh standard (≥5 mg/L) at all locations. TDS ranged from 100–170 mg/L, complying with the Bangladesh standard (1,000 mg/L). Total coliform counts ranged from 0–62 CFU/100 mL, while TSS (2–40 mg/L) and turbidity (3.98–26.2 NTU) showed localized variations. Overall, the surface water quality remained generally satisfactory; however, localized exceedances of BOD and low dissolved oxygen (DO) were observed at the monitored locations.

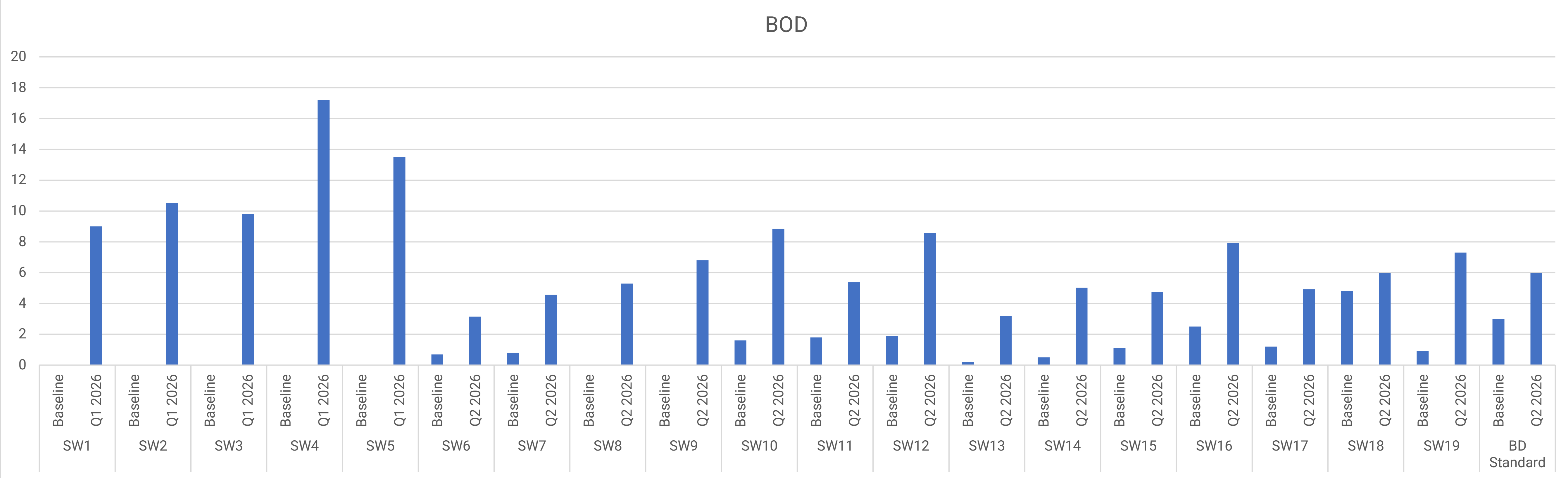
66. Surface water quality monitoring for Package 5 was conducted at SW22–SW25 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.3–7.6, remaining within the Bangladesh standard (6.5–8.5). BOD_5 concentrations ranged from 6.0–6.8 mg/L, with exceedances recorded at SW23, SW24, and SW25. COD ranged from 18–23 mg/L, while DO ranged from 5.10–5.88 mg/L, both complying with the applicable Bangladesh standards. TDS ranged from 49–67 mg/L and remained within the applicable standard, while TSS ranged from 6–8 mg/L. Oil and grease ranged from 0.26–0.32 mg/L, remaining within the applicable standard. Total coliform ranged from 11–14 CFU/100 ml, while turbidity ranged from 9.9–12.3 NTU. Overall, surface water quality was generally acceptable; however, localized BOD_5 exceedances were observed at SW23, SW24, and SW25.

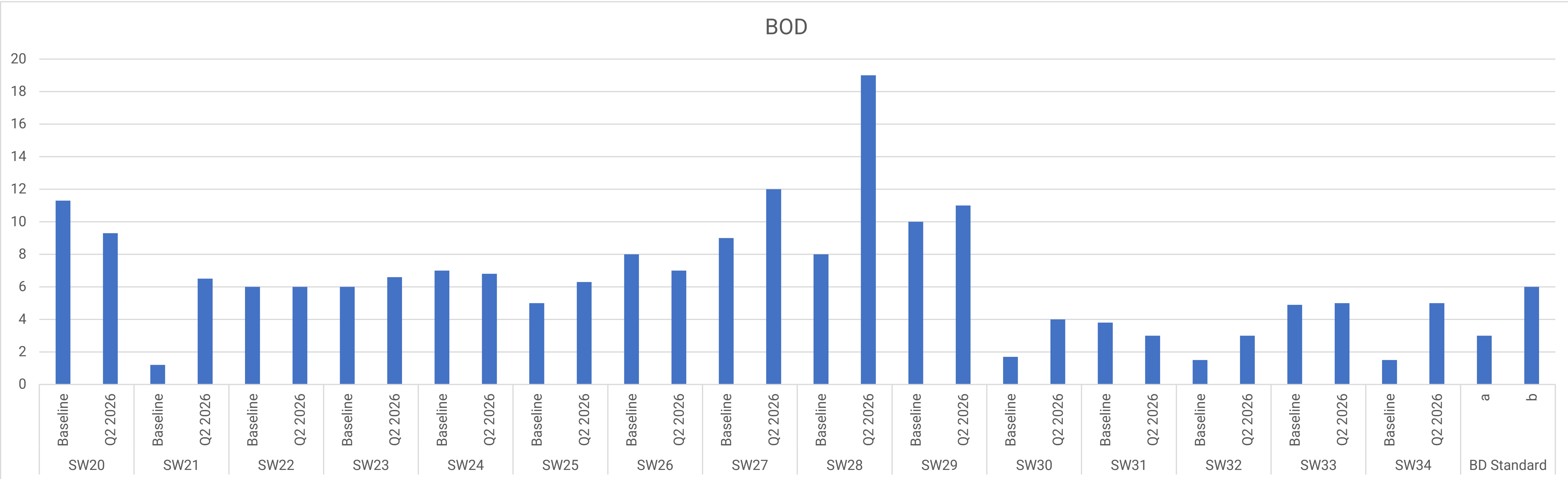
67. Surface water quality monitoring for Package 6 was conducted at SW26–SW29 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.9–7.2, remaining within the Bangladesh standard (6.5–8.5). BOD concentrations ranged from 7.0–19.0 mg/L, exceeding the Bangladesh standard (≤6 mg/L) at all monitoring locations. COD ranged from 27–31 mg/L, complying with the Bangladesh standard, while DO ranged from 4.43–5.13 mg/L, with SW27, SW28, and SW29 below the Bangladesh standard (≥5 mg/L). TDS ranged from 68–79 mg/L, remaining within the standard. Oil and grease ranged from 0.47–0.58 mg/L, complying with the Bangladesh standard (≤2 mg/L). Overall, localized exceedances of BOD and low dissolved oxygen (DO) were observed at several monitoring locations.

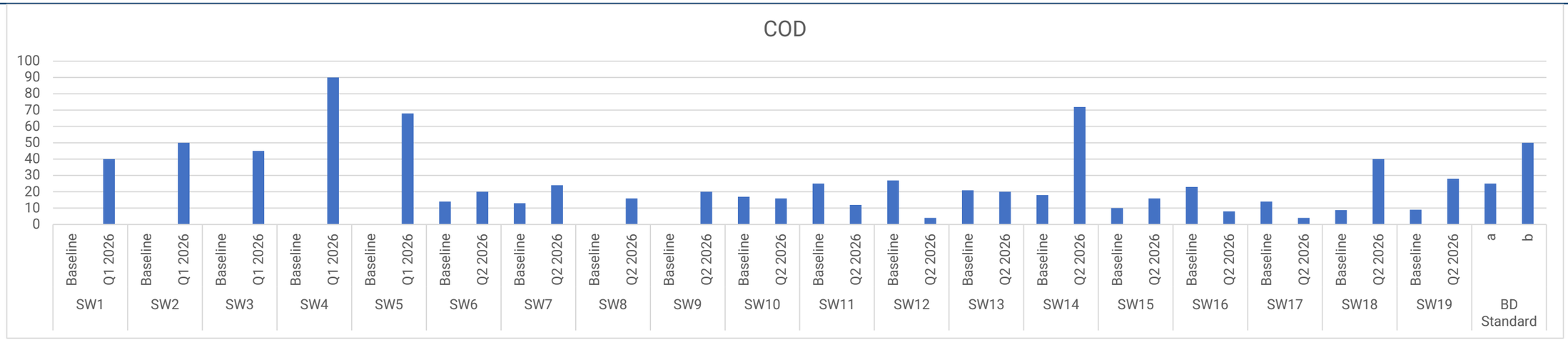
68. Surface water quality monitoring for Package 7 was conducted at SW30–SW34 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.3–7.5, remaining within the Bangladesh standard (6.5–8.5) except at SW33 (6.3), which was slightly below the standard. BOD concentrations ranged from 3.0–5.0 mg/L, complying with the Bangladesh standard (≤6 mg/L) at all locations. COD ranged from 8–10 mg/L, remaining well within the Bangladesh standard (≤50 mg/L). DO ranged from 6.47–8.27 mg/L, complying with the Bangladesh standard (≥5 mg/L) at all monitoring locations. Total coliform counts ranged from 15–23 N/100 mL, indicating a substantial improvement compared to the baseline values. TDS ranged from 29–39 mg/L, while TSS (5–7 mg/L) and turbidity (4.55–6.12 NTU) remained low. Oil and grease ranged from 1.2–1.6 mg/L, complying with the Bangladesh standard (≤2 mg/L).

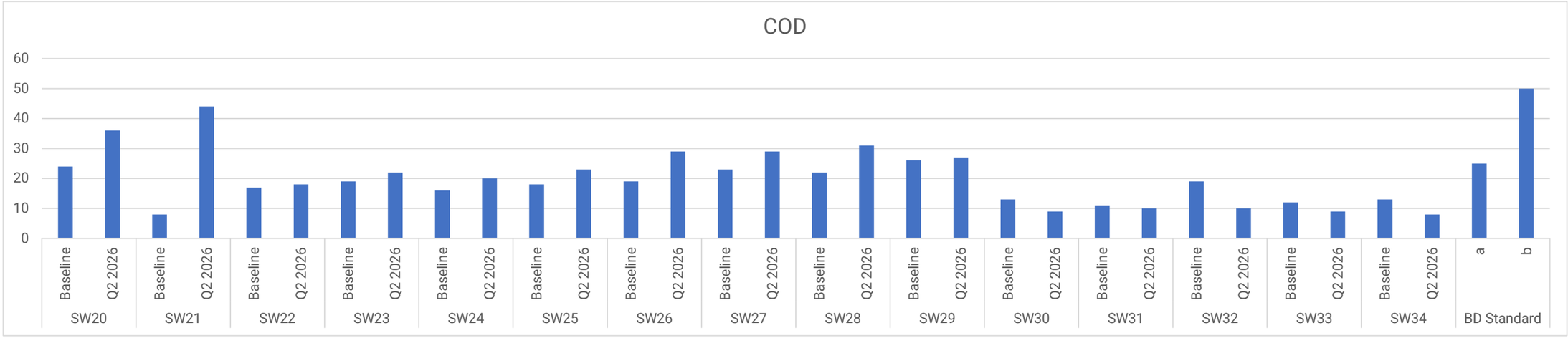
Figure 3-3: Surface Water Quality Analysis Results in Package 1- 7 project locations

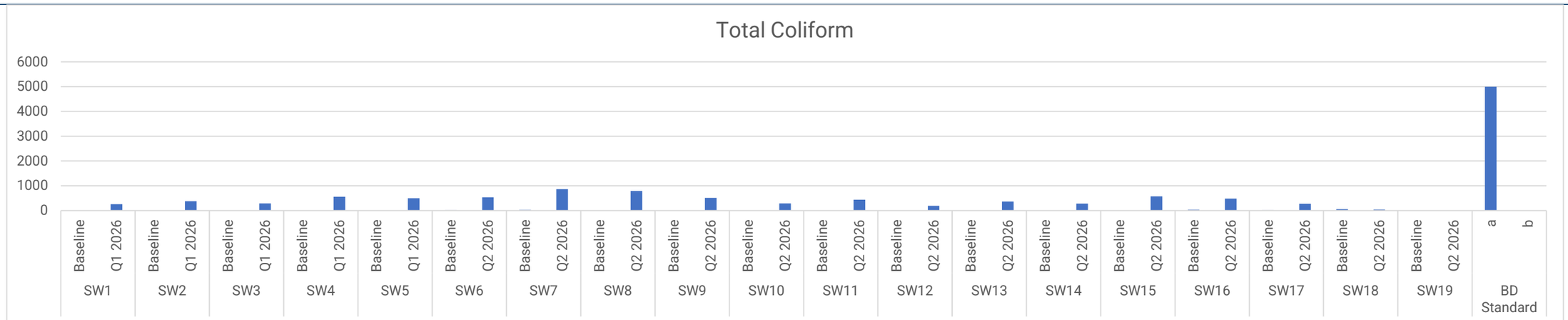


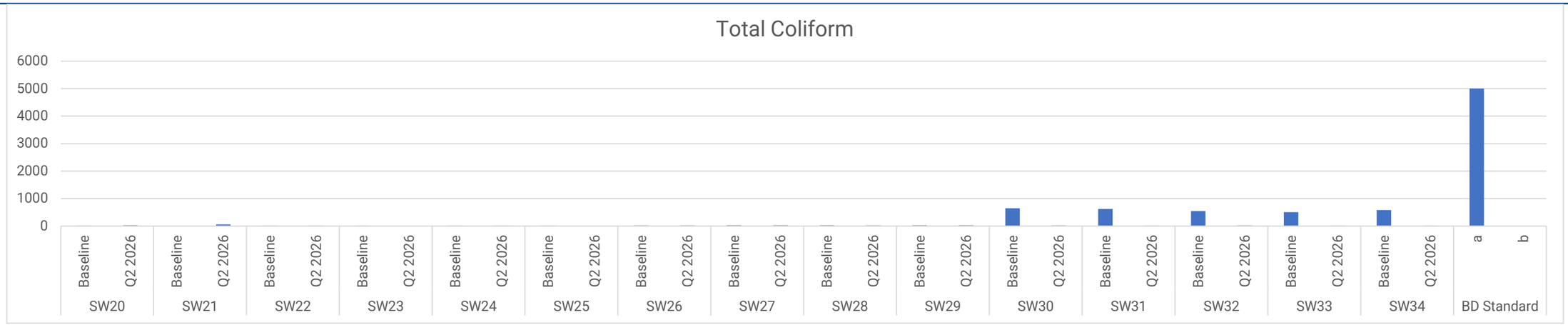

BOD
20
18
16
14
12
10
8
6
4
2
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
BD Standard

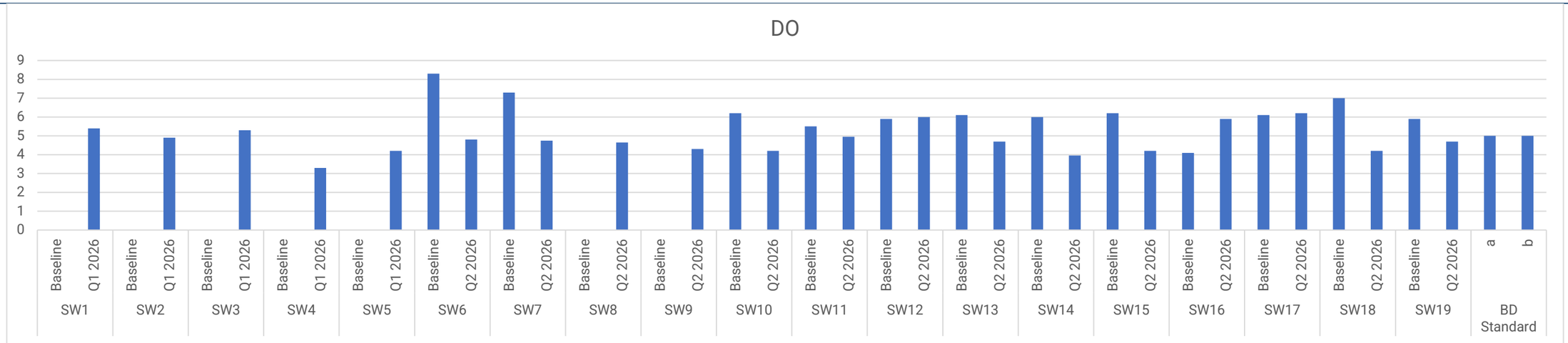

BOD
20
18
16
14
12
10
8
6
4
2
0
Baseline
Q2 2026
a
b
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
BD Standard

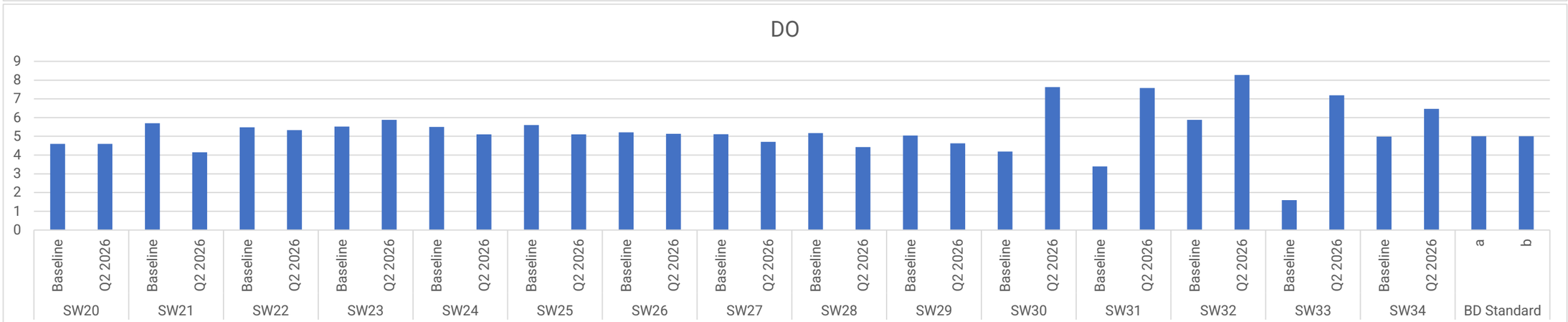

COD
100
90
80
70
60
50
40
30
20
10
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard


COD
60
50
40
30
20
10
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
BD Standard

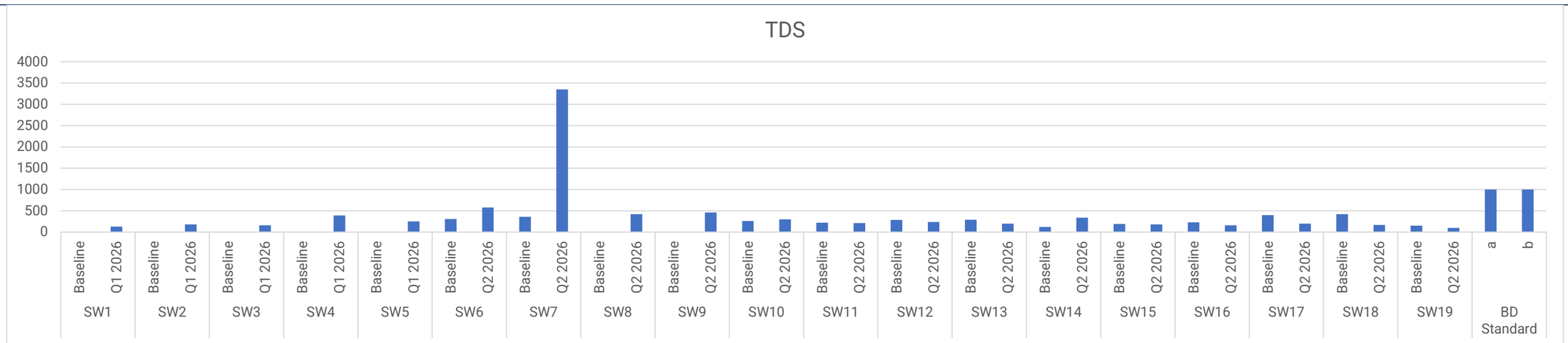

Total Coliform
6000
5000
4000
3000
2000
1000
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

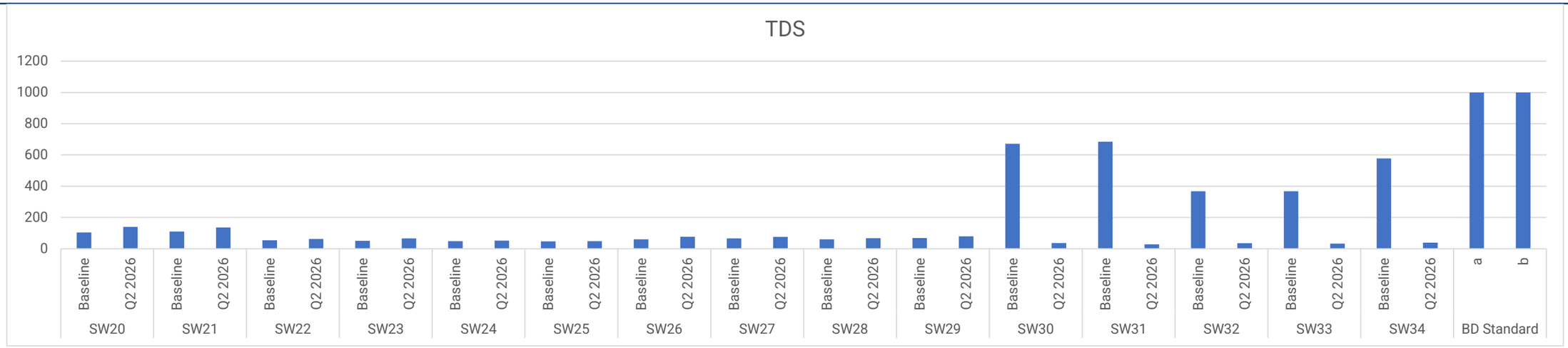

Total Coliform
6000
5000
4000
3000
2000
1000
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
a
b
BD Standard

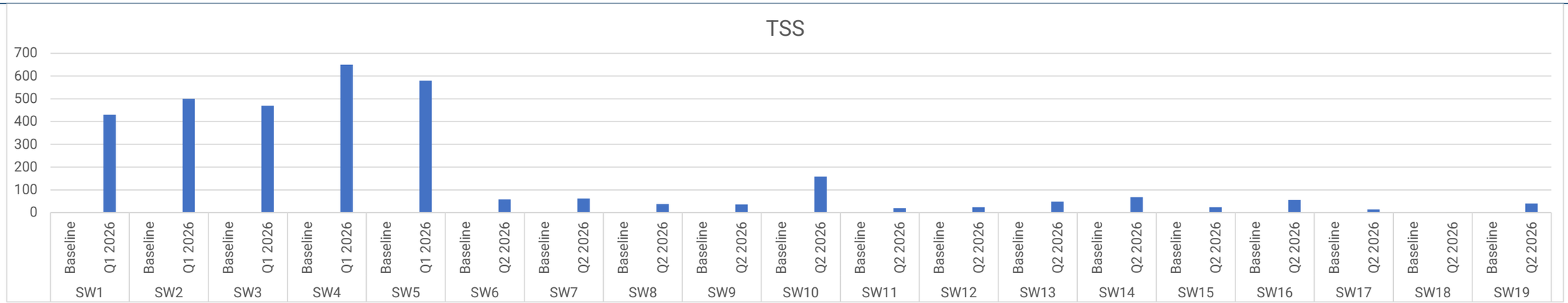

DO
9
8
7
6
5
4
3
2
1
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

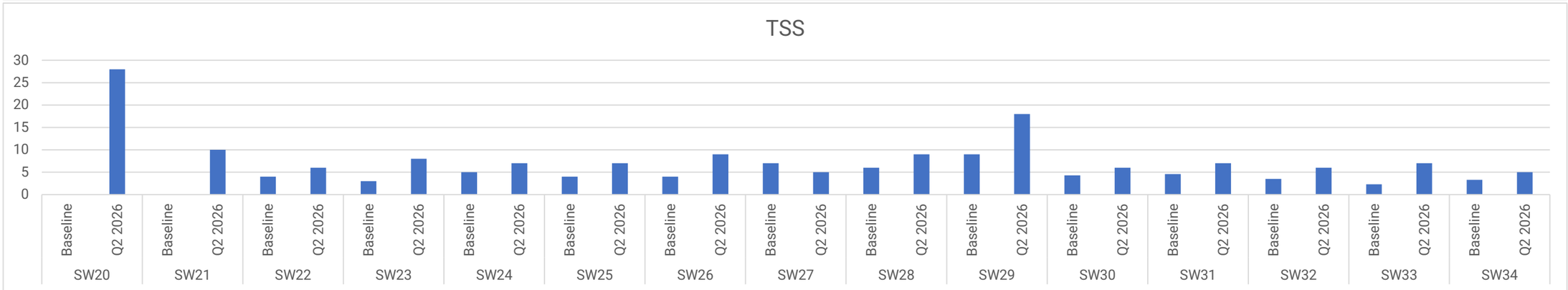

DO
9
8
7
6
5
4
3
2
1
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
a
b
BD Standard

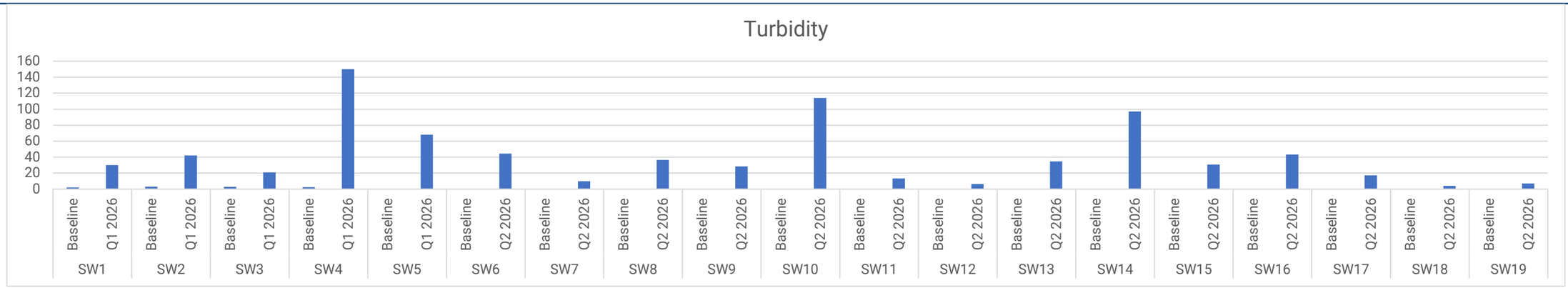

pH
10
9
8
7
6
5
4
3
2
1
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34

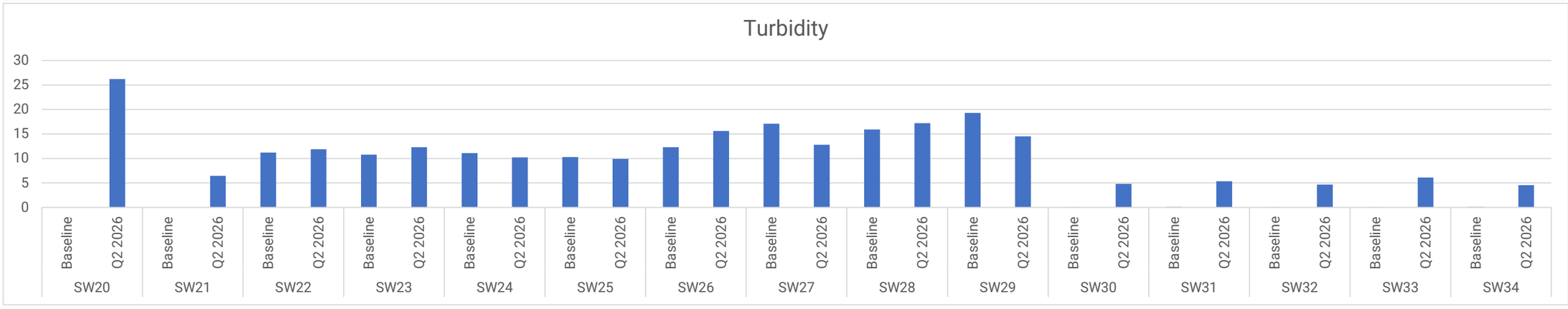

TDS
4000
3500
3000
2500
2000
1500
1000
500
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
a
b
BD Standard

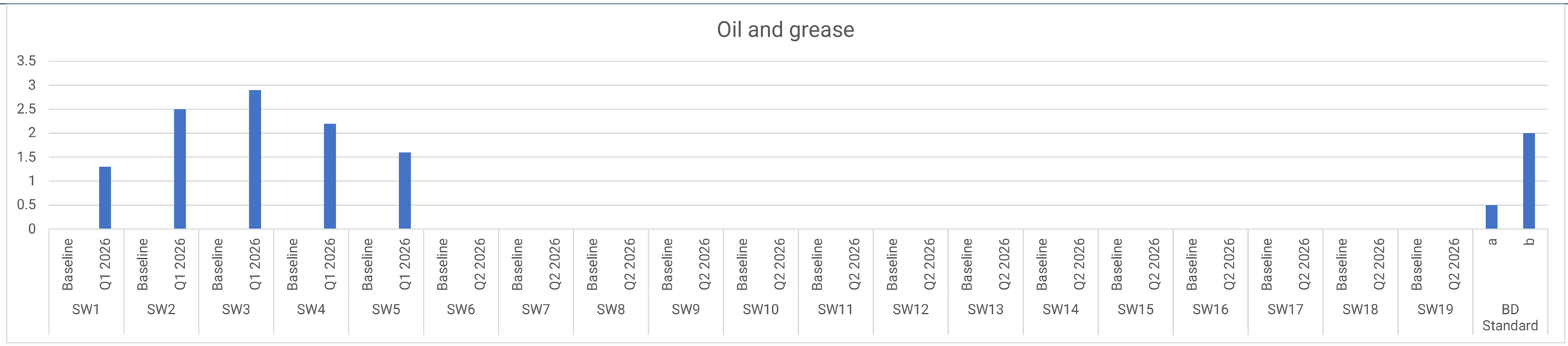

TDS
1200
1000
800
600
400
200
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
a
b
BD Standard

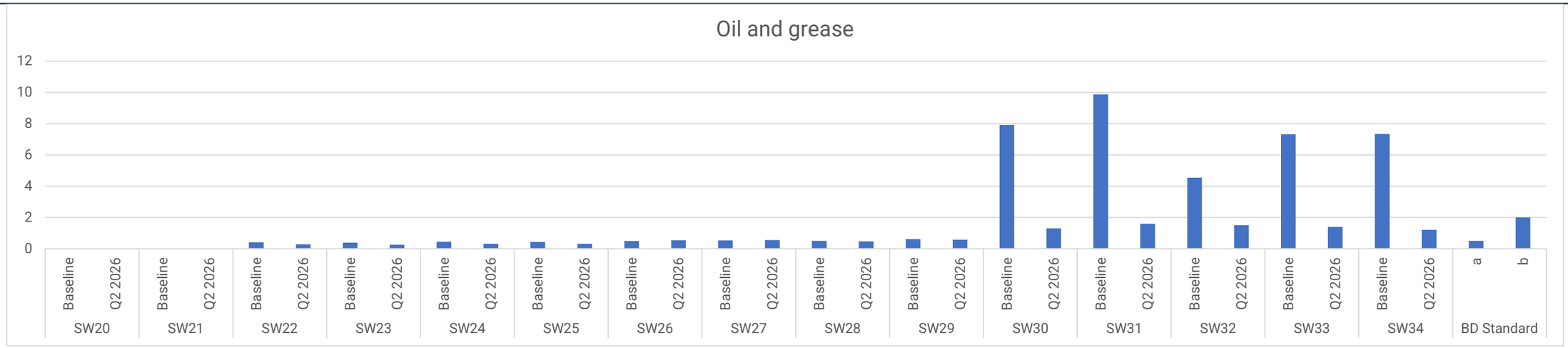

TSS
700
600
500
400
300
200
100
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19

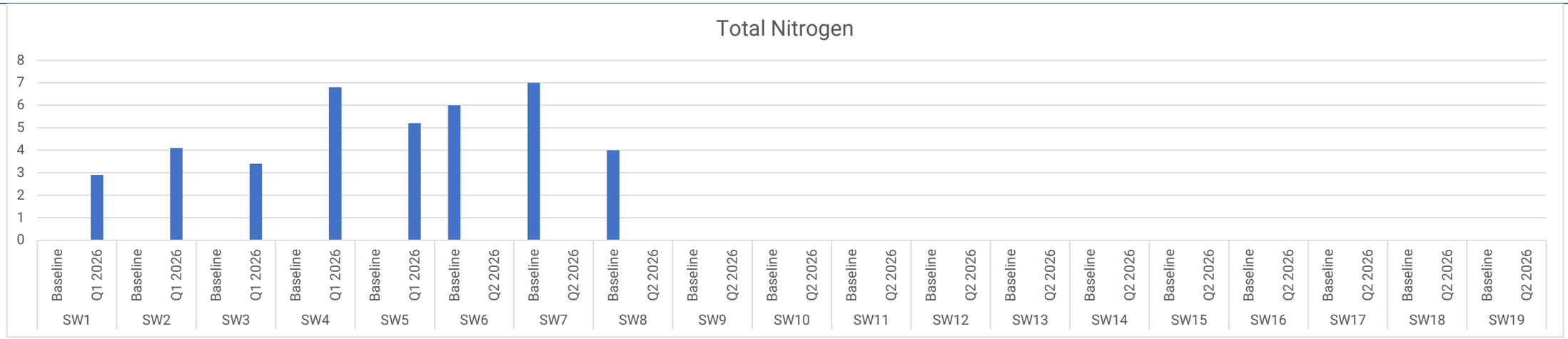

TSS
30
25
20
15
10
5
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34


Turbidity
160
140
120
100
80
60
40
20
0
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19


Turbidity
30
25
20
15
10
5
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34


Oil and grease
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q1 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
Baseline
Q2 2026
a
b
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
BD Standard


Oil and grease
12
10
8
6
4
2
0
Baseline
Q2 2026
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34
a
b
BD Standard


Total Nitrogen
8
7
6
5
4
3
2
1
0
Baseline
Q1 2026
Q2 2026
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19

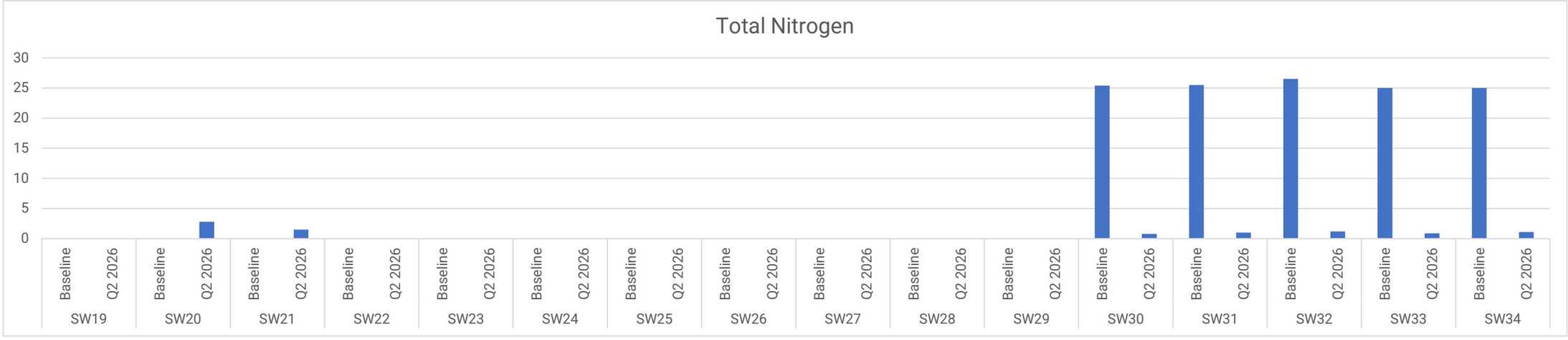

Total Nitrogen
30
25
20
15
10
5
0
Baseline
Q2 2026
SW19
SW20
SW21
SW22
SW23
SW24
SW25
SW26
SW27
SW28
SW29
SW30
SW31
SW32
SW33
SW34

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	CFU/100 ml	mg/L	--	mg/L	mg/L	NTU	mg/L	mg/L
Package 1													
1.	SW1	Baseline						7			2.1		
		Q1 2026	1.9	9	40	260	5.4	7.3	130	430	30	1.3	3
2.	SW2	Baseline						6.9			3		
		Q1 2026	2.2	10.5	50	380	4.9	7.5	180	500	42	2.5	3.9
3.	SW3	Baseline						6.7			2.8		
		Q1 2026	2.1	9.8	45	290	5.3	7.4	160	470	21	2.9	3.5
4.	SW4	Baseline						6.7			2.5		
		Q1 2026	3.3	17.2	90	560	3.3	7.8	390	650	150	2.2	6.5
5.	SW5	Baseline						7					
		Q1 2026	2.7	13.5	68	500	4.2	7.6	250	580	68	1.6	5
Package 3													
Satkhira- Rupsha TL													
6.	SW6	Baseline	0.55	0.7	14	19	8.3	8.3	310				
		Q2 2026	0.58	3.14	20	537	4.8	7.3	580	58	44.5		
7.	SW7	Baseline	0.87	0.8	13	23	7.3	7.4	360				
		Q2 2026	1.12	4.56	24	862	4.75	7.8	3350	62	9.71		
8.	SW8	Baseline											
		Q2 2026	0.56	5.29	16	788	4.65	7.9	420	38	36.6		
9.	SW9	Baseline											
		Q2 2026	1.33	6.81	20	510	4.3	8.1	460	36	28.5		
Satkhira- Manirampur TL													

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	CFU/100 ml	mg/L	--	mg/L	mg/L	NTU	mg/L	mg/L
10.	SW10	Baseline		1.6	17		6.2	7.6	260				
		Q2 2026	0.62	8.84	16	286	4.2	7.8	300	158	114		
11.	SW11	Baseline		1.8	25		5.5	6.8	220				
		Q2 2026	0.47	5.37	12	438	4.95	8.1	210	20	13.4		
12.	SW12	Baseline		1.9	27		5.9	7.9	285				
		Q2 2026	0.63	8.55	4	193	6	8.1	240	24	6.4		
Kushtia- Meherpur TL													
13.	SW13	Baseline	0.84	0.2	21	11	6.1	7.46	290				
		Q2 2026	0.86	3.19	20	364	4.7	7.8	200	48	34.7		
14.	SW14	Baseline	0.13	0.5	18	14	6	7.97	120				
		Q2 2026	2.54	5.03	72	277	3.96	7.5	340	68	97.1		
15.	SW15	Baseline	0.02	1.1	10	12	6.2	7.24	190				
		Q2 2026	0.51	4.76	16	569	4.2	7.9	180	24	30.7		
16.	SW16	Baseline	2.89	2.5	23	34	4.1	7.42	230				
		Q2 2026	0.72	7.91	8	484	5.9	8	160	56	43.2		
17.	SW17	Baseline	0.58	1.2	14	22	6.1	7.72	400				
		Q2 2026	1.67	4.92	4	271	6.2	8.1	200	14	17.3		
Package 4													
Bagerhat-Pirojpur-Bhandaria TL													
18.	SW18	Baseline	-	4.8	8.8	56	7	8.2	419	-	-	-	-
		Q2 2026	<0.1	6	40	44	4.2	7.3	170	2	3.98	<2.0	1.6
Purba Sadipur- Domar TL													
19.	SW19	Baseline	-	0.9	9	-	5.9	6.8	150				

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	CFU/100 ml	mg/L	--	mg/L	mg/L	NTU	mg/L	mg/L
		Q2 2026	<0.1	7.3	28	0	4.7	7.2	100	40	6.94	<2.0	2.4
Niamatpur- Patnitola TL													
20.	SW20	Baseline	1.8	11.3	24	14	4.6	7.4	105				
		Q2 2026	<0.1	9.3	36	28	4.6	7.3	140	28	26.2	<2.0	2.8
Gopalganj-Shibchar TL													
21.	SW21	Baseline		1.2	8	-	5.7	7.3	110				
		Q2 2026	<0.1	6.5	44	62	4.15	7.5	136	10	6.44	<2.0	1.5
Package 5													
400/230 kV GIS Substation at Kaliganj, Gazipur													
22.	SW22	Baseline	0.24	6	17	17	5.48	7.1	54	4	11.2	0.41	<1.0
		Q2 2026	0.26	6	18	14	5.33	7.5	63	6	11.9	0.28	<1.0
23.	SW23	Baseline	0.21	6	19	15	5.52	7.1	51	3	10.8	0.39	<1.0
		Q2 2026	0.23	6.6	22	11	5.88	7.6	67	8	12.3	0.26	<1.0
24.	SW24	Baseline	0.21	7	16	15	5.5	7.3	49	5	11.1	0.44	<1.0
		Q2 2026	0.27	6.8	20	13	5.1	7.4	52	7	10.2	0.31	<1.0
25.	SW25	Baseline	0.22	5	18	14	5.6	7.1	47	4	10.3	0.43	<1.0
		Q2 2026	0.32	6.3	23	11	5.1	7.3	49	7	9.9	0.32	<1.0
Package 6													
400/230/132 KV GIS Substation at Purbachal													
26.	SW26	Baseline	0.24	8	19	21	5.21	7.2	61	4	12.3	0.49	<1.0
		Q2 2026	0.22	7	29	21	5.13	7.1	77	9	15.6	0.54	<1.0
27.	SW27	Baseline	0.31	9	23	27	5.11	6.9	67	7	17.1	0.53	<1.0
		Q2 2026	0.34	12	29	27	4.71	6.9	76	5	12.8	0.55	<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	CFU/100 ml	mg/L	--	mg/L	mg/L	NTU	mg/L	mg/L
28.	SW28	Baseline	0.29	8	22	29	5.17	6.9	60	6	15.9	0.5	<1.0
		Q2 2026	0.25	19	31	22	4.43	7.1	68	9	17.2	0.47	<1.0
29.	SW29	Baseline	0.33	10	26	31	5.04	6.9	69	9	19.3	0.61	<1.0
		Q2 2026	0.34	11	27	26	4.63	7.2	79	18	14.5	0.58	<1.0
Package 7													
30.	SW30	Baseline	0.43	1.7	13	6.5×102	4.19	6.8	672	4.3	0.078	7.92	25.4
		Q2 2026	0.44	4	9	20	7.63	7.2	37	6	4.82	1.3	0.79
31.	SW31	Baseline	0.27	3.8	11	6.2×102	3.4	6.6	685	4.6	0.097	9.87	25.5
		Q2 2026	0.3	3	10	18	7.58	7.5	29	7	5.34	1.6	1
32.	SW32	Baseline	0.27	1.5	19	5.5×102	5.88	7.2	368	3.5	0.046	4.54	26.5
		Q2 2026	0.42	3	10	23	8.27	6.7	35	6	4.65	1.5	1.2
33.	SW33	Baseline	0.28	4.9	12	5.1×102	1.6	6.7	368	2.3	0.066	7.32	25
		Q2 2026	0.38	5	9	15	7.19	6.3	33	7	6.12	1.4	0.88
34.	SW34	Baseline	0.21	1.5	13	5.8×102	4.98	5.87	578	3.3	0.084	7.34	25
		Q2 2026	0.29	5	8	18	6.47	7.1	39	5	4.55	1.2	1.1
Bangladesh Standard[7]		**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 Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

a. Water usable for fisheries

b. Water usable for irrigation

NYS- Not yet submitted

[7] 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

69. 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.

70. 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

71. 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 1,3,4,5,6 and 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	01.03.2026-03.03.2026
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 3					
Satkhira- Rupsha TL					
6.	GW6	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	Tube-Well	16.05.2026-22.05.2026
7.	GW7	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	Tube-Well	
8.	GW8	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	Tube-Well	
9.	GW9	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	Tube-Well	
Satkhira- Manirampur TL					
10.	GW10	Magura, Satkhira	22.741249 N, 89.091239 E	Tube-Well	16.05.2026-22.05.2026
11.	GW11	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	Tube-Well	
12.	GW12	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	Tube-Well	
Kushtia- Meherpur TL					
13.	GW13	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	Tube-Well	16.05.2026-22.05.2026
14.	GW14	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	Tube-Well	

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
15.	GW15	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	Tube-Well	
16.	GW16	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	Tube-Well	
17.	GW17	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	Tube-Well	
Package 4					
Bagerhat-Pirojpur-Bhandaria TL					
18.	GW18	T-2/4	22°38'18.4"N 89°49'17.2"E	Tube-Well	
Purba Sadipur- Domar TL					
19.	GW19	AP-12	25°54'40"N 88°45'27"E	Deep	
Niamatpur- Patnitola TL					
20.	GW20	Chatara Bazar, Niamatpur	24°53'37.28"N 88°38'42.44"E	Deep	
Gopalganj-Shibchar TL					
21.	GW21	Near AP-01	23°16'25.89"N 90° 0'46.002"E	Tube-Well	
Package 5					
400/230 kV GIS Substation at Kaliganj, Gazipur					
22.	GW22	Hafej Sheikh's House	23.968512 N; 90.548888 E	Tube-Well	02.03.2026-03.03.2026
23.	GW23	Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	23.963364 N; 90.548810 E		
24.	GW24	Mamun Mia's House	23.965455 N; 90.554317 E		
25.	GW25	Late Abdul Razzak's House	23.969981 N; 90.553189 E		
Package 6					
400/230/132 KV GIS Substation at Purbachal					
26.	GW26	Beside Dulal Mia's Shop	23.864612 N 90.475215 E	Tube-Well	17.02.2026-18.02.2026
27.	GW27	Beside Dipak Chakraborty' s Shop	23.866261 N 90.475607 E		
28.	GW28	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.862167 N 90.477112 E		
29.	GW29	Beside Mohadev Karmakar's house	23.868053 N 90.476480 E		
Package 7					
30.	GW30	Near 132/33 kV GIS substation at Phultola	22°55'16.39"N 89°29'16.90"E	Tube-Well	03.03.2026 - 05.03.2026
31.	GW31	Near 230/132/33 kV GIS substation at Rupsha	22°46'14.21"N 89°37'4.58"E		
32.	GW32	Near 132/33 kV GIS substation at Maheshpur	23°47'22.87"N 88°40'39.49"E		
33.	GW33	Near 132/33 kV GIS substation at Meherpur	23°20'37.01"N 88°55'28.37"E		

Sl. No.	Code	Sampling Location	GPS Coordinate	Type of Source	Sampling Date
34.	GW34	Near 132/33 kV GIS substation at Manirampur	22°58'29.84"N 89°13'44.03"E		

Source: Periodic Environmental Baseline Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 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

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

73. 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), 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.

74. Groundwater quality monitoring for Package-1 was conducted at GW1–GW5 during the baseline and Q1 2026 periods. The monitoring results indicate that pH ranged from 7.0–7.4, remaining within the Bangladesh drinking water standard (6.5–8.5). Arsenic concentrations ranged from 0.019–0.038 mg/L, complying with the Bangladesh standard (0.05 mg/L). Chloride concentrations (115–145 mg/L), manganese (0.20–0.28 mg/L), turbidity (2.3–3.1 NTU), hardness (12–16 mg/L), and temperature (25–28°C) also complied with the applicable standards. Iron concentrations ranged from 0.35–0.85 mg/L, remaining within the acceptable Bangladesh standard (0.3–1.0 mg/L). No fecal or total coliforms were detected in any groundwater sample. Overall, groundwater quality in Package-1 remained satisfactory during the reporting period.

75. Groundwater quality monitoring for Package-3 was conducted at GW6–GW17 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.5–8.2, remaining within the Bangladesh standard. Arsenic concentrations ranged from 0.001–0.059 mg/L, with GW9 (0.059 mg/L) slightly exceeding the Bangladesh standard (0.05 mg/L). Chloride concentrations ranged from 15–700 mg/L, with GW6 (700 mg/L) and GW7 (400 mg/L) exceeding the Bangladesh standard (250 mg/L). Iron concentrations ranged from 0.05–0.85 mg/L, remaining within the acceptable limit, while manganese concentrations (0.03 mg/L) complied with the Bangladesh standard (0.4 mg/L). Turbidity ranged from 1.2–24.5 NTU, with GW6 (13.3 NTU) and GW10 (24.5 NTU) exceeding the Bangladesh standard (5 NTU). Electrical conductivity ranged from 320–2,280 µS/cm, reflecting relatively higher mineral content at several locations. No fecal or total coliform contamination was detected in any groundwater sample. Overall, groundwater quality remained generally acceptable; however, localized exceedances of arsenic, chloride and turbidity were observed at a few monitoring locations.

76. Groundwater quality monitoring for Package 4 was conducted at GW18–GW21 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.8–8.1, remaining within the Bangladesh drinking water standard (6.5–8.5). Arsenic concentrations ranged from 0.001–0.044 mg/L, complying with the Bangladesh standard (0.05 mg/L) at all locations. Iron concentrations ranged from 0.12–1.43 mg/L, with GW21 (1.43 mg/L) exceeding the Bangladesh standard (0.3–1.0 mg/L). Manganese concentrations ranged from 0.03–0.66 mg/L, with GW21 (0.66 mg/L) exceeding the Bangladesh standard (0.4 mg/L), while the remaining locations complied. Chloride concentrations (20–40 mg/L), fecal and total coliform (0 N/100 mL), hardness (50–60 mg/L), and temperature (25.9–26.2°C) complied with the applicable standards. Turbidity ranged

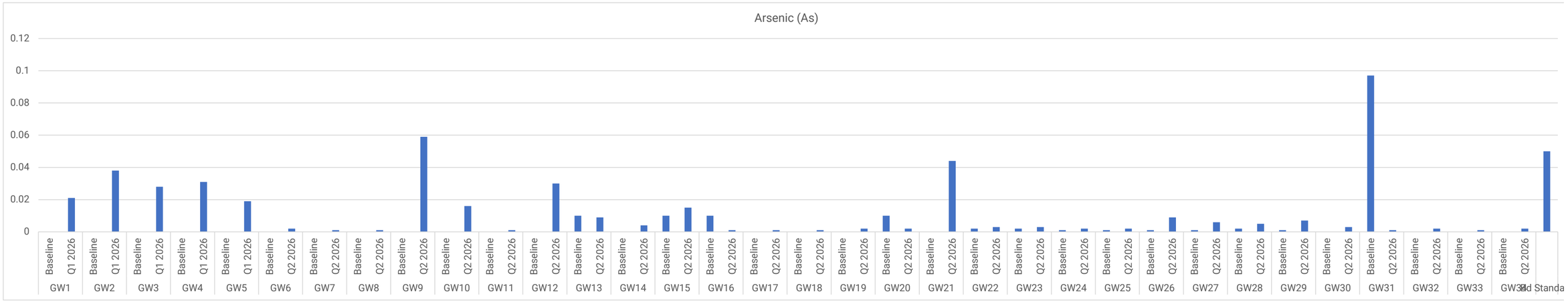
from 0.25–12.5 NTU, with GW21 (12.5 NTU) exceeding the Bangladesh standard (5 NTU). Localized exceedances of iron, manganese, and turbidity were observed at GW21.

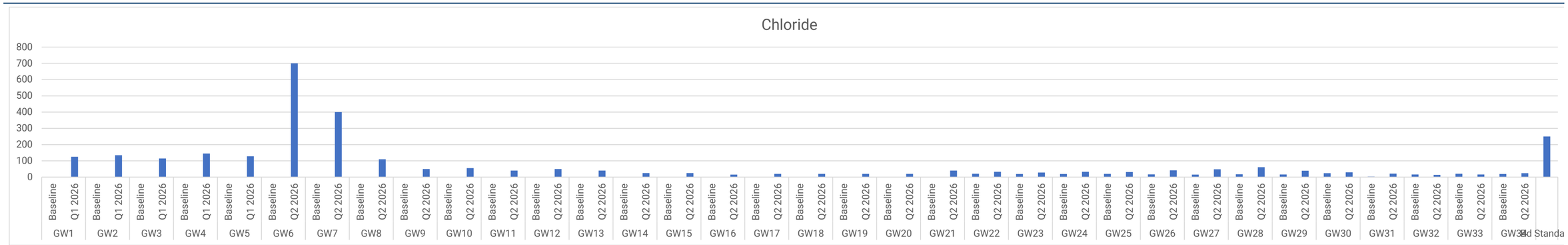
77. Groundwater quality monitoring for Package 5 was conducted at GW22–GW25 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.3–7.8, remaining within the Bangladesh drinking water standard (6.5–8.5). Arsenic (0.002–0.003 mg/L) and chloride (28–33 mg/L) complied with the applicable standards. Iron concentrations ranged from 0.8–1.3 mg/L, with GW22, GW23, and GW25 exceeding the Bangladesh standard (0.3–1.0 mg/L). Manganese (0.03 mg/L), turbidity (0.05–0.08 NTU), EC (248–277 µS/cm), hardness (6–14 mg/L), and TPH (0.01–0.04 mg/L) remained within the applicable standards. Overall, groundwater quality in Package 5 was generally satisfactory, with localized exceedances observed only for iron.

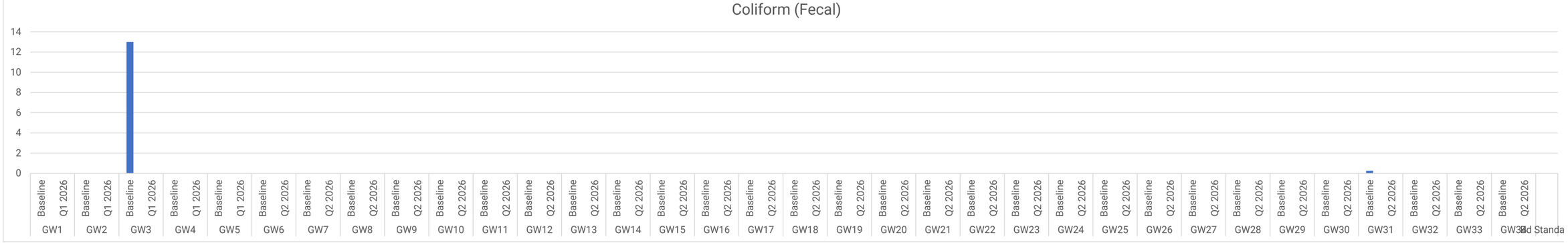
78. Groundwater quality monitoring for Package 6 was conducted at GW26–GW29 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.1–7.2, remaining within the Bangladesh drinking water standard. Arsenic (0.005–0.009 mg/L), chloride (39–61 mg/L), manganese (0.03–0.06 mg/L), turbidity (0.05–0.07 NTU), EC (252–332 µS/cm), hardness (7–9 mg/L), and TPH (0.02–0.04 mg/L) complied with the applicable standards. Iron concentrations ranged from 0.45–0.51 mg/L, remaining within the Bangladesh standard (0.3–1.0 mg/L). Overall, all monitored groundwater quality parameters complied with the applicable Bangladesh drinking water standards.

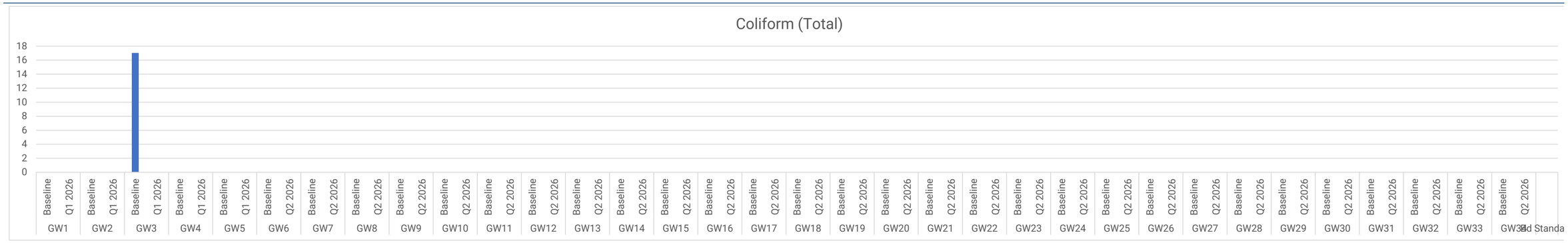
79. Groundwater quality monitoring for Package 7 was conducted at GW30–GW34 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 7.1–7.4, remaining within the Bangladesh drinking water standard (6.5–8.5). Arsenic (0.001–0.003 mg/L), chloride (14–24 mg/L), fecal and total coliform (0 N/100 mL), EC (391–542 µS/cm), hardness (6–9 mg/L), temperature (24.7–25.4°C), and TPH (0.02–0.05 mg/L) complied with the applicable standards. Iron concentrations ranged from 0.4–1.5 mg/L, with GW30 (0.7 mg/L), GW31 (0.6 mg/L), GW32 (0.9 mg/L), and GW34 (1.5 mg/L) exceeding the Bangladesh standard (0.3–1.0 mg/L). Manganese exceeded the Bangladesh standard (0.4 mg/L) at GW31 (0.5 mg/L), while turbidity (1.29–2.01 NTU) remained within the standard (5 NTU). Overall, groundwater quality was generally satisfactory; however, localized exceedances of iron and manganese were observed at a few monitoring locations. Continued monitoring is recommended to ensure compliance with the applicable standards.

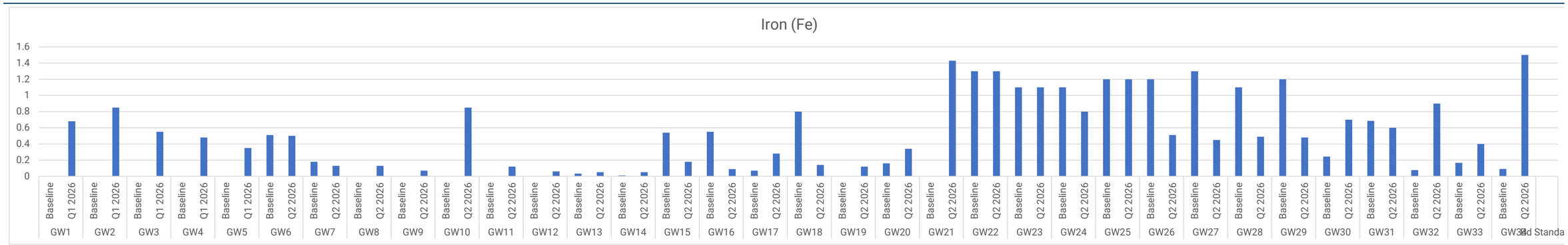
Figure 3-4: Ground Water Quality Analysis Results in Package 1- 7 project locations

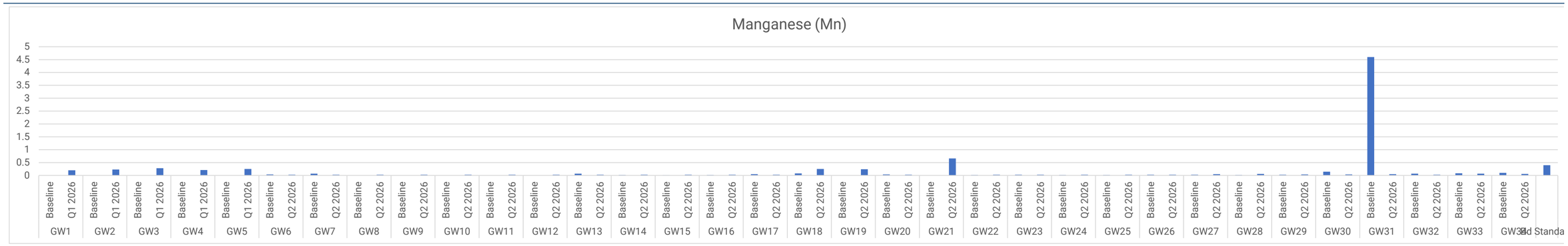


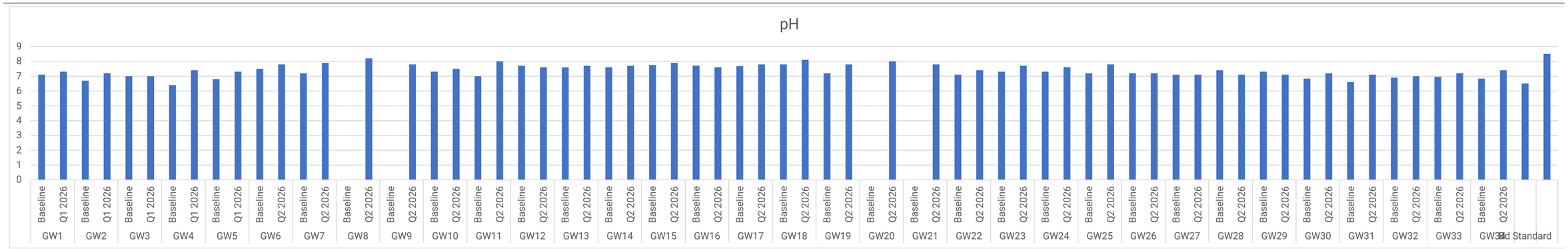


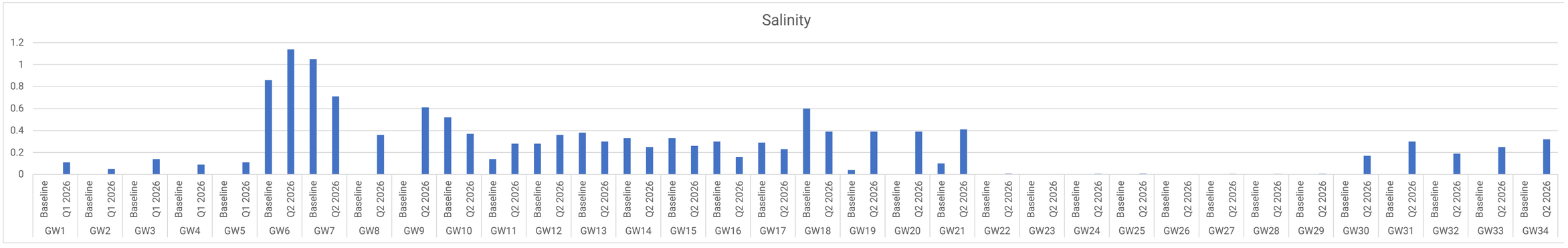


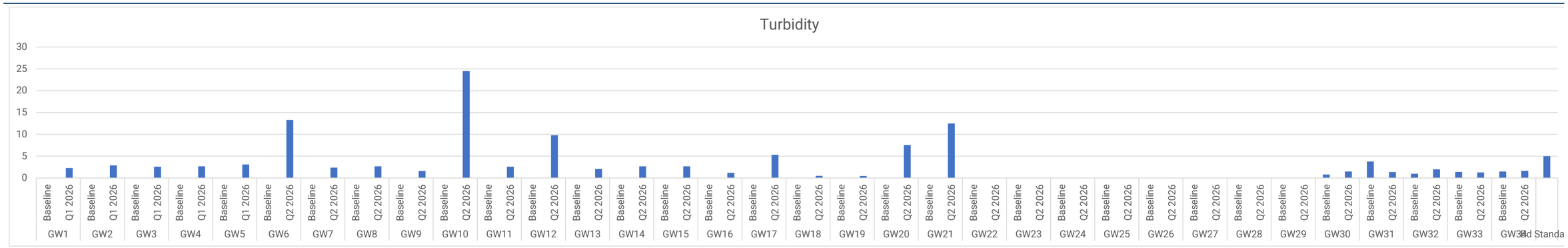


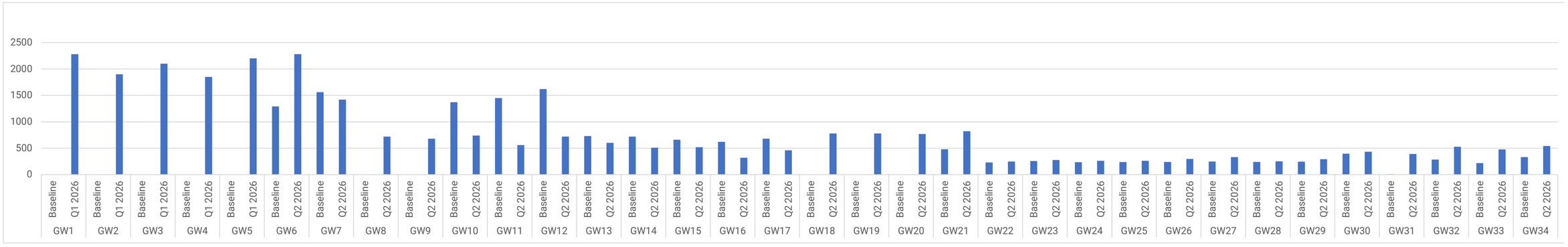

Iron (Fe)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Baseline
Q1 2026
Q2 2026
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
Standa

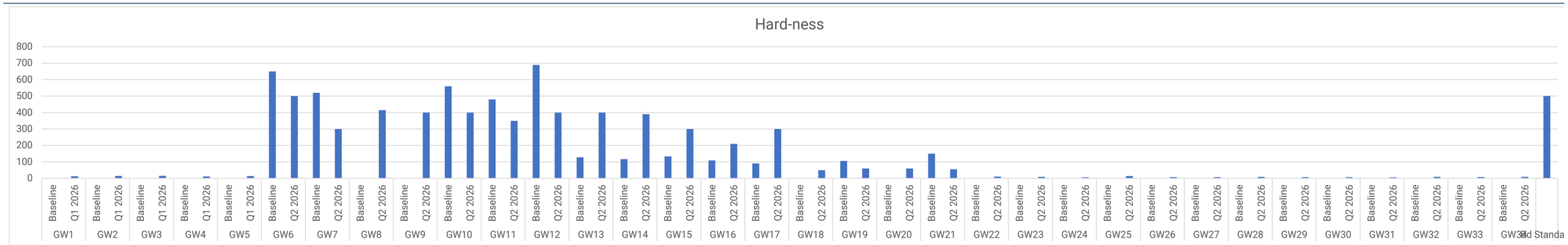

Manganese (Mn)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q1 2026
Q2 2026
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
Standa

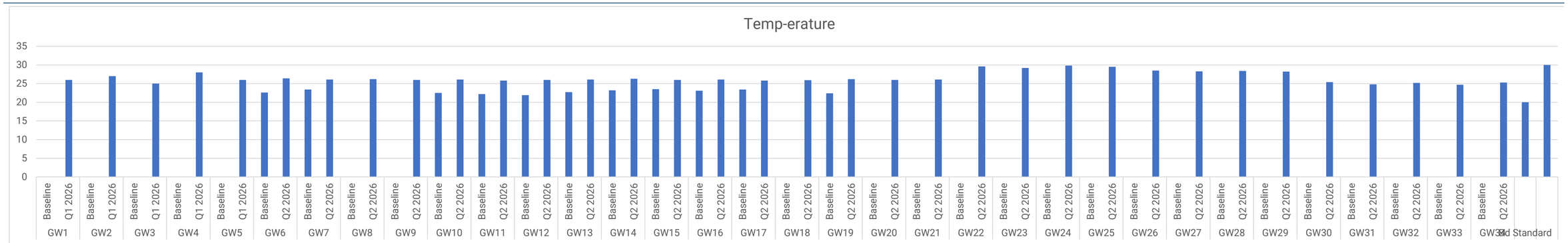

pH
9
8
7
6
5
4
3
2
1
0
Baseline
Q1 2026
Q2 2026
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34
Standard


Salinity
1.2
1
0.8
0.6
0.4
0.2
0
Baseline
Q1 2026
Q2 2026
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


Turbidity
30
25
20
15
10
5
0
Baseline
Q1 2026
Q2 2026
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
Standa


2500
2000
1500
1000
500
0
Baseline
Q1 2026
Q2 2026
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


Hard-ness
800
700
600
500
400
300
200
100
0
Baseline
Q1 2026
Q2 2026
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
Standa


Temp-erature
35
30
25
20
15
10
5
0
Baseline
Q1 2026
Q2 2026
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
Standard

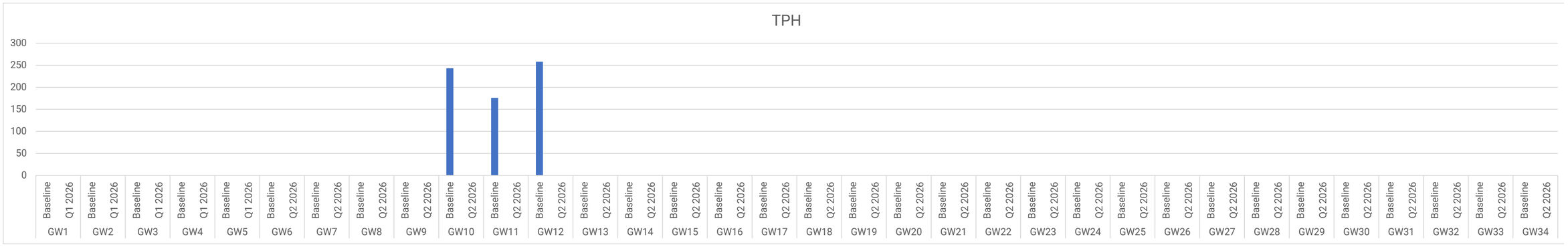

TPH
300
250
200
150
100
50
0
Baseline
Q1 2026
Q2 2026
GW1
GW2
GW3
GW4
GW5
GW6
GW7
GW8
GW9
GW10
GW11
GW12
GW13
GW14
GW15
GW16
GW17
GW18
GW19
GW20
GW21
GW22
GW23
GW24
GW25
GW26
GW27
GW28
GW29
GW30
GW31
GW32
GW33
GW34

Table 3-9: Ground Water Quality Analysis of Package 1,3,4,5,6 and 7 locations

SL No	Code	Period	Parameters Concentration												
			Arsenic (As)	Chloride	Coliform (Fecal)	Coliform (Total)	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	EC	Hard-ness	Temp-erature	TPH
			mg/L	mg/L	CFU/100ml	CFU/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
Package 1															
1.	GW1	Baseline			0	0			7.1						
		Q1 2026	0.021	125	0	0	0.68	0.2	7.3	0.11	2.3	2280	13	26	0.05
2.	GW2	Baseline			0	0			6.7						
		Q1 2026	0.038	135	0	0	0.85	0.23	7.2	0.05	2.9	1900	15	27	0.06
3.	GW3	Baseline			13	17			7						
		Q1 2026	0.028	115	0	0	0.55	0.28	7	0.14	2.6	2100	16	25	0.04
4.	GW4	Baseline			0	0			6.4						
		Q1 2026	0.031	145	0	0	0.48	0.21	7.4	0.09	2.7	1850	12	28	0.08
5.	GW5	Baseline			0	0			6.8						
		Q1 2026	0.019	128	0	0	0.35	0.25	7.3	0.11	3.1	2200	14	26	0.05
Package 3															
Satkhira- Rupsha TL															
6.	GW6	Baseline	0		0	0	0.51	0.04	7.5	0.86		1290	650	22.6	BDL*
		Q2 2026	0.002	700	0	0	0.5	0.03	7.8	1.14	13.3	2280	500	26.4	
7.	GW7	Baseline	0		0	0	0.18	0.07	7.2	1.05		1560	520	23.4	BDL*
		Q2 2026	0.001	400	0	0	0.13	0.03	7.9	0.71	2.4	1420	300	26.1	
8.	GW8	Baseline													
		Q2 2026	0.001	110	0	0	0.13	0.03	8.2	0.36	2.7	720	415	26.2	
9.	GW9	Baseline													
		Q2 2026	0.059	50	0	0	0.07	0.03	7.8	0.61	1.6	680	400	26	
Satkhira- Manirampur TL															
10.	GW10	Baseline							7.3	0.52		1370	560	22.5	243
		Q2 2026	0.016	55	0	0	0.85	0.03	7.5	0.37	24.5	740	400	26.1	
11.	GW11	Baseline							7	0.14		1450	480	22.2	176
		Q2 2026	0.001	40	0	0	0.12	0.03	8	0.28	2.6	560	350	25.8	
12.	GW12	Baseline							7.7	0.28		1620	690	21.9	258
		Q2 2026	0.03	50	0	0	0.06	0.03	7.6	0.36	9.8	720	400	26	
Kushtia- Meherpur TL															
13.	GW13	Baseline	0.01		0	0	0.033	0.07	7.59	0.38		730	128	22.7	BDL*
		Q2 2026	0.009	40	0	0	0.05	0.03	7.7	0.3	2.1	600	400	26.1	
14.	GW14	Baseline	0		0	0	0.01	0.02	7.6	0.33		720	117	23.2	BDL*
		Q2 2026	0.004	25	0	0	0.05	0.03	7.7	0.25	2.7	510	390	26.3	
15.	GW15	Baseline	0.01		0	0	0.54	0.01	7.75	0.33		660	134	23.5	BDL*

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	CFU/100ml	CFU/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
		Q2 2026	0.015	25	0	0	0.18	0.03	7.9	0.26	2.7	520	300	26	
16.	GW16	Baseline	0.01		0	0	0.55	0.02	7.71	0.3		620	109	23.1	BDL*
		Q2 2026	0.001	15	0	0	0.09	0.03	7.6	0.16	1.2	320	210	26.1	
17.	GW17	Baseline	0		0	0	0.07	0.05	7.68	0.29		680	91	23.4	BDL*
		Q2 2026	0.001	20	0	0	0.28	0.03	7.8	0.23	5.3	460	300	25.8	
Package 4															
Bagerhat-Pirojpur-Bhandaria TL															
18.	GW18	Baseline	0	-	0	0	0.8	0.08	7.8	0.6	-	3.1			
		Q2 2026	0.001	20	0	0	0.14	0.25	8.1	0.39	0.52	780	50	25.9	ND
Purba Sadipur- Domar TL															
19.	GW19	Baseline	0	-	0	0	-	-	7.2	0.04	-	-	106	22.4	-
		Q2 2026	0.002	20	0	0	0.12	0.24	7.8	0.39	0.47	780	60	26.2	ND
Niamatpur- Patnitola TL															
20.	GW20	Baseline	0.01	-	0	0	0.16	0.04	-	0	-	-	-	-	-
		Q2 2026	0.002	20	0	0	0.34	0.03	8	0.39	7.54	770	60	26	0.13
Gopalganj-Shibchar TL															
21.	GW21	Baseline	0	-	0	0	-	-	-	0.1	-	480	150	-	-
		Q2 2026	0.044	40	0	0	1.43	0.66	7.8	0.41	12.5	820	55	26.1	0.07
Package 5															
400/230 kV GIS Substation at Kaliganj, Gazipur															
22.	GW22	Baseline	0.002	21	-	-	1.3	0.02	7.1	-	0.04	231	-	-	-
		Q2 2026	0.003	33			1.3	0.03	7.4	0.007	0.06	248	11	29.6	0.04
23.	GW23	Baseline	0.002	19	-	-	1.1	0.03	7.3	-	0.02	257	-	-	-
		Q2 2026	0.003	28			1.1	0.03	7.7	0.003	0.05	277	9	29.2	0.01
24.	GW24	Baseline	0.001	19	-	-	1.1	0.02	7.3	-	0.03	234	-	-	-
		Q2 2026	0.002	33			0.8	0.03	7.6	0.006	0.07	262	6	29.8	0.02
25.	GW25	Baseline	0.001	20	-	-	1.2	0.02	7.2	-	0.03	237	-	-	-
		Q2 2026	0.002	31			1.2	0.03	7.8	0.008	0.08	263	14	29.5	0.02
Package 6															
400/230/132 KV GIS Substation at Purbachal															
26.	GW26	Baseline	0.001	17	-	-	1.2	0.03	7.2	-	0.02	241	-	-	-
		Q2 2026	0.009	42			0.51	0.03	7.2	0.003	0.07	297	8	28.5	0.02
27.	GW27	Baseline	0.001	15	-	-	1.3	0.03	7.1	-	0.03	247	-	-	-
		Q2 2026	0.006	48			0.45	0.05	7.1	0.005	0.05	332	7	28.3	0.02
28.	GW28	Baseline	0.002	18	-	-	1.1	0.02	7.4	-	0.03	239	-	-	-

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	CFU/100ml	CFU/100ml	mg/L	mg/L	-	‰	NTU	µS/cm	mg/L	°C	mg/L
		Q2 2026	0.005	61			0.49	0.06	7.1	0.005	0.05	252	9	28.4	0.04
29.	GW29	Baseline	0.001	16	-	-	1.2	0.03	7.3	-	0.03	246	-	-	-
		Q2 2026	0.007	39			0.48	0.04	7.1	0.006	0.05	292	7	28.2	0.02
Package 7															
30.	GW30	Baseline	<0.01	24	0	-	0.244	0.148	6.84	-	0.81	395.31	-	-	-
		Q2 2026	0.003	30	0	0	0.7	0.04	7.2	0.17	1.51	434	7	25.4	0.02
31.	GW31	Baseline	0.097	3.4	0.27	-	0.685	4.6	6.6	-	3.8	11	-	-	-
		Q2 2026	0.001	22	0	0	0.6	0.05	7.1	0.3	1.37	391	6	24.8	0.05
32.	GW32	Baseline	<0.01	16	0		0.076	0.068	6.9	-	0.98	283.71	-	-	-
		Q2 2026	0.002	14	0	0	0.9	0.03	7	0.19	2.01	526	9	25.2	0.03
33.	GW33	Baseline	<0.01	21	0		0.167	0.085	6.96	-	1.41	218.68	-	-	-
		Q2 2026	0.001	16	0	0	0.4	0.07	7.2	0.25	1.29	477	8	24.7	0.02
34.	GW34	Baseline	<0.01	19	0		0.091	0.098	6.84	-	1.51	332.22	-	-	-
		Q2 2026	0.002	24	0	0	1.5	0.06	7.4	0.32	1.65	542	9	25.3	0.04
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 Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

BDL= Below Detection Limit

NYS- Not yet submitted

3.3.3 Soil Quality

3.3.3.1 Sampling Methods

80. Soil samples were collected from Package 1, 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 (Soil Resources Development Institute and Bangladesh Environmental Engineering Training & Lab Service Ltd.). 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 1,3,4,5,6 and 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	01.03.2026-03.03.2026
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 3				
Satkhira- Rupsha TL				
6.	SQ6	Kudir Bottola, Khulna	22.772409 N, 89.616823 E	16.05.2026-22.05.2026
7.	SQ7	Vadgati, Batiaghata, Khulna	22.715719 N, 89.577748 E	
8.	SQ8	Bagdari Bazar, Dumuria, Khulna	22.733853 N, 89.415113 E	
9.	SQ9	Chorgram, Tala, Satkhira	22.740735 N, 89.256071 E	
Satkhira- Manirampur TL				
10.	SQ10	Magura, Satkhira	22.741249 N, 89.091239 E	16.05.2026-22.05.2026
11.	SQ11	Protappur, Keshobpur, Jashore	22.868778 N, 89.185722 E	
12.	SQ12	Aminpur, Keshobpur, Jashore	22.960354 N, 89.229797 E	
Kushtia- Meherpur TL				
13.	SQ13	Bottail, Boro Pukur Par, Kushtia	23.873121 N, 89.092463 E	16.05.2026-22.05.2026
14.	SQ14	Malihad, Mirpur, Kushtia	23.841134 N, 88.914512 E	
15.	SQ15	Baghdanga, Kushtia Sadar, Kushtia	23.841030 N, 89.035337 E	

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
16.	SQ16	Gopal Nagar, Gangni, Meherpur	23.827057 N, 88.777141 E	
17.	SQ17	Natun Modondanga, Shampur, Meherpur	23.791050 N, 88.679091 E	
Package 4				
Bagerhat-Pirojpur-Bhandaria TL				
18.	SQ18	T-5/0	23°18'4.91"N 90°2'57.73"E	
Purba Sadipur- Domar TL				
19.	SQ19	T-8/0	25°51'37.67"N 88°43'50.66"E	
Niamatpur- Patnitola TL				
20.	SQ20	T-4/0	25°48'31.21"N 88°41'25.45"E	
Gopalganj-Shibchar TL				
21.	SQ21	Near Ap 08	23°19'50.42"N 90° 5'27.58"E	
Package 5				
400/230 kV GIS Substation at Kaliganj, Gazipur				
22.	SQ22	Hafej Sheikh's House	23.968768 N; 90.549979 E	02.03.2026-03.03.2026
23.	SQ23	Beside Kaliganj- Kapasia Rd. located near Nolir Bridge	23.966955 N; 90.549420 E	
24.	SQ24	Beside the Bridge of Mohani Fuldi Road	23.967744 N; 90.553671 E	
25.	SQ25	Beside the Late Abdul Razzak's House	23.969622 N; 90.552497 E	
Package 6				
400/230/132 KV GIS Substation at Purbachal				
26.	SQ26	In front of Dulal Mia's house	23.864784 N; 90.476049 E	17.02.2026-18.02.2026
27.	SQ27	In front of Dipak Chakraborty's Shop	23.865711 N; 90.475979 E	
28.	SQ28	Beside Boro Kau Shree Shree Sarbojonin Durga Mondir	23.863131 N; 90.476066 E	
29.	SQ29	Beside Mohadev Karmakar's house	23.863318 N; 90.476336 E	
Package 7				
30.	SQ30	Near 132/33 kV GIS substation at Phultola	22°55'27.87"N 89°29'8.40"E	03.03.2026 - 05.03.2026
31.	SQ31	Near 230/132/33 kV GIS substation at Rupsha	22°46'22.90"N 89°37'1.00"E	

Sl. No.	Code	Sampling Location	GPS Coordinate	Sampling Date
32.	SQ32	Near 132/33 kV GIS substation at Maheshpur	23°47'26.34"N 88°40'43.78"E	
33.	SQ33	Near 132/33 kV GIS substation at Meherpur	23°20'39.91"N 88°55'25.94"E	
34.	SQ34	Near 132/33 kV GIS substation at Manirampur	22°58'35.65"N 89°13'45.54"E	

Source: Periodic Environmental Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 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

81. Analysis results of Soil Quality are represented in Table 3-11 where the values are compared with the standard limit. Monitoring photographs and lab sheets are attached in Annexure 32 and Annexure 33.

82. Soil quality monitoring for Package 1 was conducted at SQ1–SQ5 during the baseline and Q1 2026 periods. The monitoring results indicate that pH ranged from 6.5–7.2, remaining within the applicable Dutch standard (5.8–8.3). Copper concentrations ranged from 0.05–0.09 mg/kg and lead concentrations ranged from 8–19 mg/kg, both remaining well below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 0.19–0.27 mg/kg and chromium concentrations ranged from 25–34 mg/kg, remaining below the applicable standards of 0.8 mg/kg and 100 mg/kg, respectively. Organic content ranged from 1.22–1.65% during Q1 2026.

83. Soil quality monitoring for Package 3 was conducted at SQ6–SQ17 covering the Satkhira–Rupsha TL, Satkhira–Manirampur TL and Kushtia–Meherpur TL during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.0–6.8. Copper concentrations ranged from 0.26–2.45 mg/kg and lead concentrations ranged from 2.03–20.68 mg/kg, both remaining below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 0.06–0.43 mg/kg and chromium concentrations ranged from 31.82–88.66 mg/kg, remaining below the applicable standards of 0.8 mg/kg and 100 mg/kg, respectively. Organic content ranged from 0.76–1.32% during Q2 2026.

84. Soil quality monitoring for Package 4 was conducted at SQ18–SQ21 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.0–7.6. Copper concentrations ranged from 1.57–2.76 mg/kg and lead concentrations ranged from 0–9.10 mg/kg, both remaining below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 3.51–3.91 mg/kg, exceeding the applicable standard of 0.8 mg/kg at all four monitoring locations (SQ18–SQ21). Chromium concentrations ranged from 3.89–105.61 mg/kg, with exceedances recorded at SQ18 (105.61 mg/kg) and SQ21 (104.66 mg/kg) against the applicable standard of 100 mg/kg. Organic content ranged from 0.16–1.49% during Q2 2026.

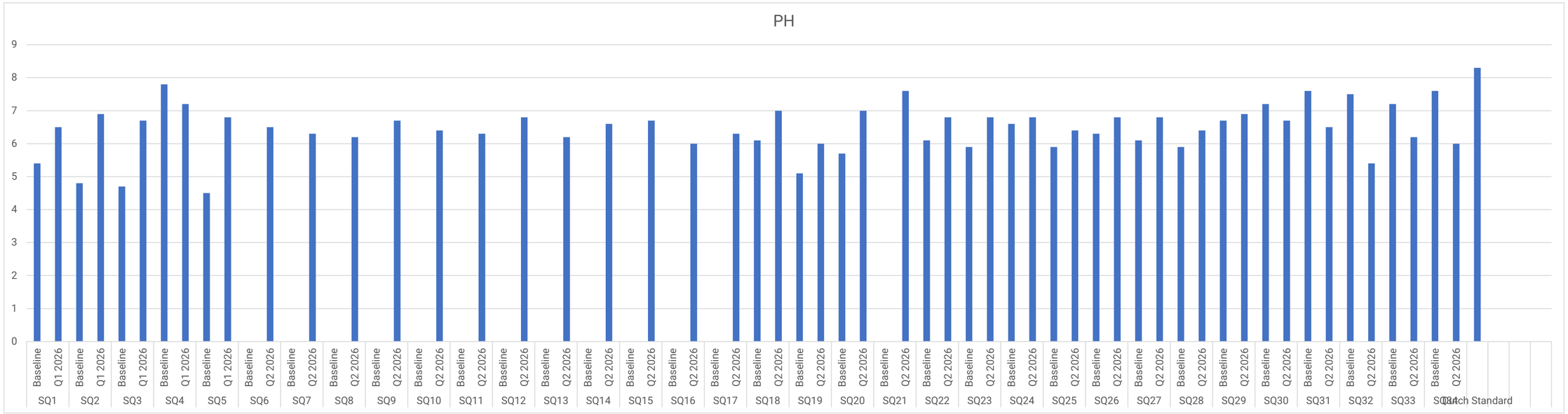
85. Soil quality monitoring for Package 5 was conducted at SQ22–SQ25 at the 400/230 kV GIS Substation at Kaliganj, Gazipur during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.4–6.8. Copper concentrations ranged from 3.18–3.25 mg/kg and lead concentrations ranged from 5.56–9.76 mg/kg, both remaining below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 0.56–0.87 mg/kg, with exceedances recorded at SQ23 (0.87 mg/kg) and SQ25 (0.81 mg/kg) against the applicable standard of 0.8 mg/kg. Chromium concentrations ranged from 28.12–51.38 mg/kg, remaining below the applicable standard of 100 mg/kg. Organic content ranged from 6.55–11.45% during Q2 2026.

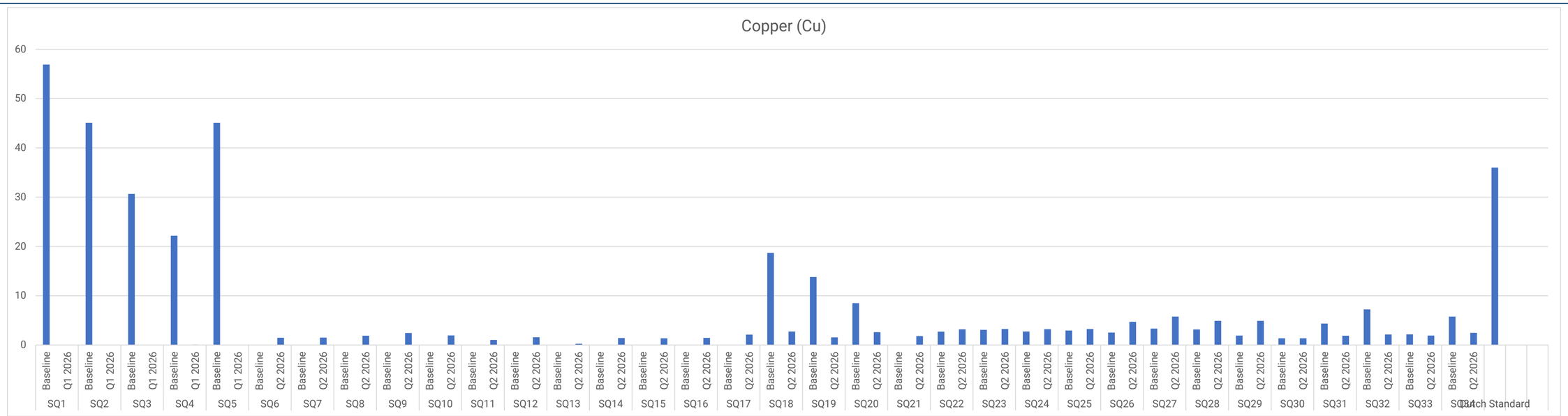
86. Soil quality monitoring for Package 6 was conducted at SQ26–SQ29 at the 400/230/132 kV GIS Substation at Purbachal during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 6.4–6.9. Copper concentrations ranged from 4.72–5.77 mg/kg and lead concentrations ranged from 4.91–7.56 mg/kg, remaining below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 0.57–0.73 mg/kg and chromium concentrations ranged from 21.47–58.14 mg/kg, both remaining below the applicable standards of 0.8 mg/kg and 100 mg/kg, respectively. Organic content ranged from 8.23–13.82% during Q2 2026.

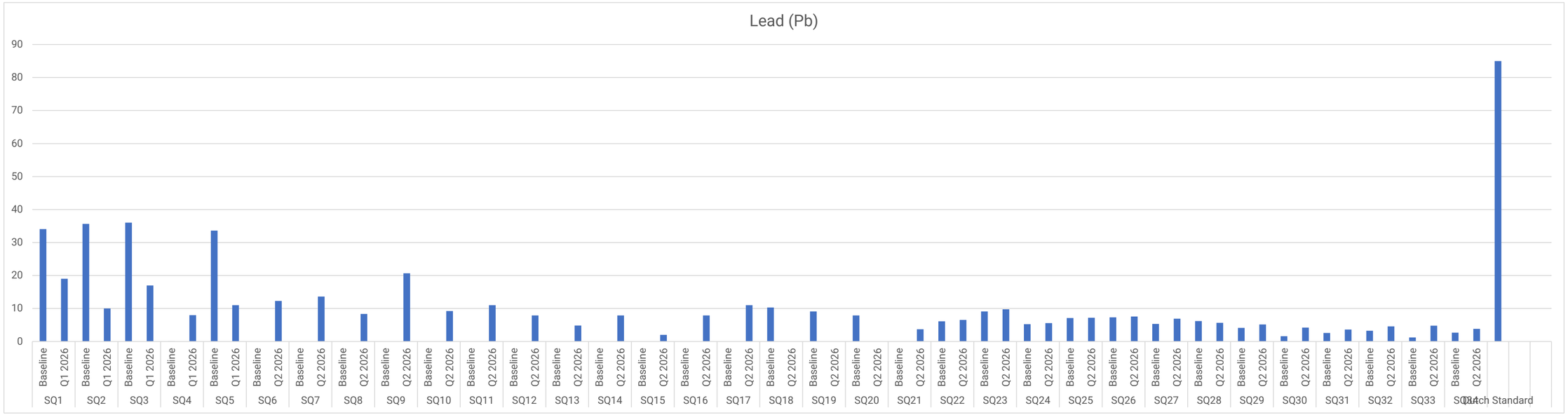
87. Soil quality monitoring for Package 7 was conducted at SQ30–SQ34 during the baseline and Q2 2026 periods. The monitoring results indicate that pH ranged from 5.4–7.6. Copper concentrations ranged from 1.38–2.47 mg/kg and lead concentrations ranged from 3.24–4.79 mg/kg, remaining below the applicable standards of 36 mg/kg and 85 mg/kg, respectively. Cadmium concentrations ranged from 0.31–0.43 mg/kg and chromium concentrations ranged from 27.39–38.03 mg/kg, remaining below the applicable standards of 0.8 mg/kg and 100 mg/kg, respectively. Organic content ranged from 9.16–11.54% during Q2 2026.

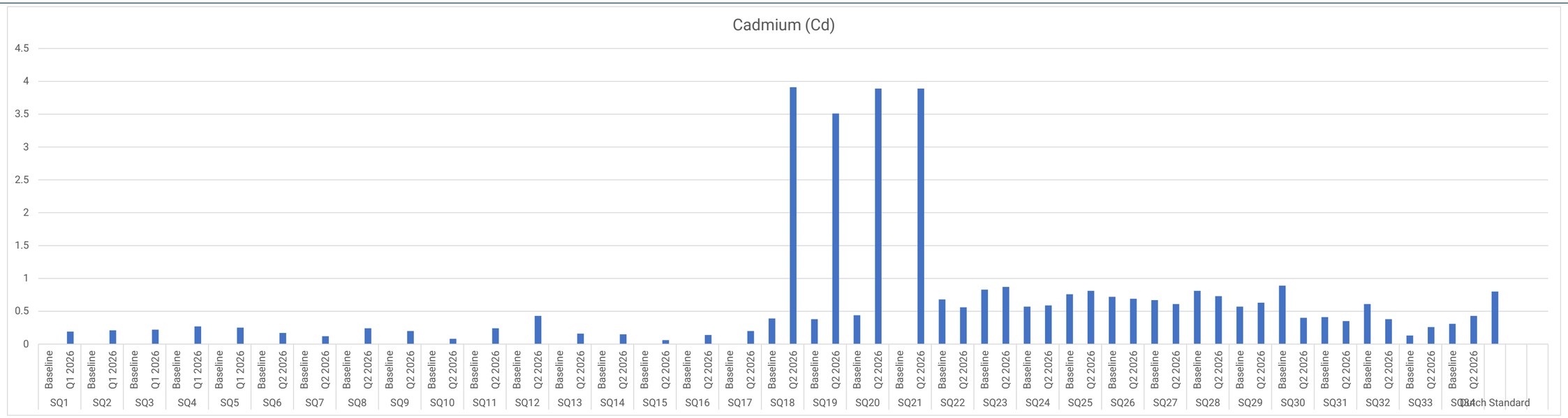
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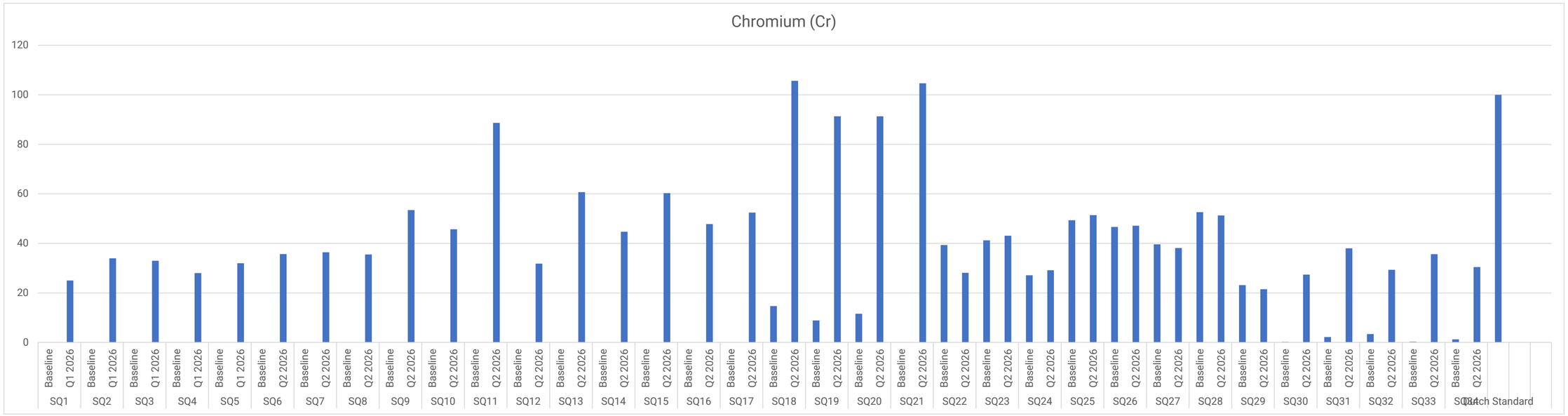
Figure 3-5: Soil Quality Analysis Results in Package 1- 7 project locations






Lead (Pb)
90
80
70
60
50
40
30
20
10
0
Baseline
Q1 2026
Q2 2026
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
Match Standard


Cadmium (Cd)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Baseline
Q1 2026
Q2 2026
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
Match Standard


Chromium (Cr)
120
100
80
60
40
20
0
Baseline
Q1 2026
Q2 2026
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
Match Standard

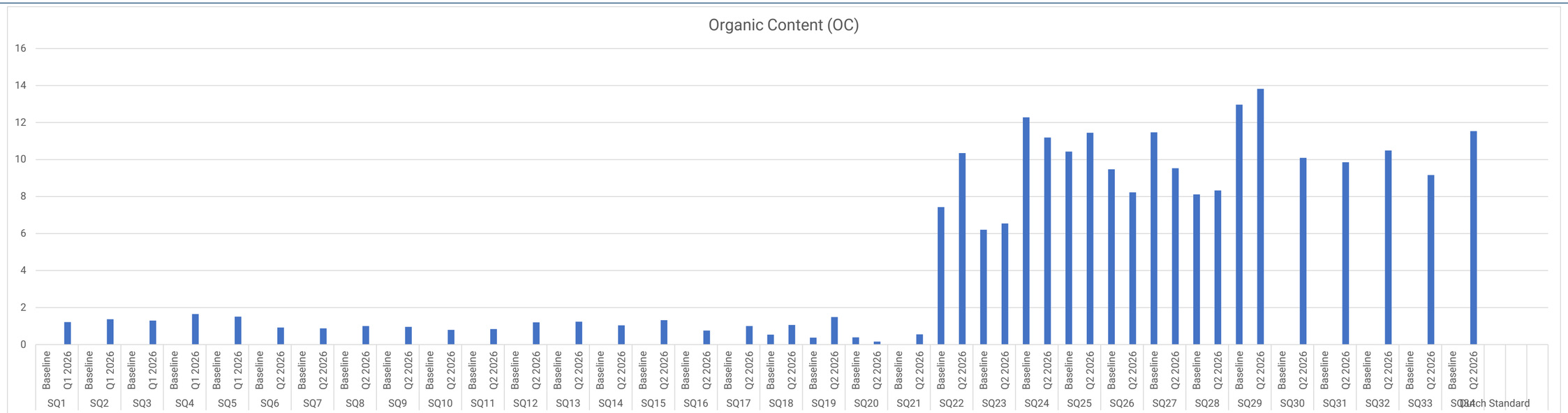

Organic Content (OC)
16
14
12
10
8
6
4
2
0
Baseline
Q1 2026
Q2 2026
SQ1
SQ2
SQ3
SQ4
SQ5
SQ6
SQ7
SQ8
SQ9
SQ10
SQ11
SQ12
SQ13
SQ14
SQ15
SQ16
SQ17
SQ18
SQ19
SQ20
SQ21
SQ22
SQ23
SQ24
SQ25
SQ26
SQ27
SQ28
SQ29
SQ30
SQ31
SQ32
SQ33
SQ34
Match Standard

Table 3-11: Soil Quality Analysis of Package 1, 3, 4, 5, 6 and 7 locations

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/kg	mg/kg	mg/kg	mg/kg	%
Package 1								
1.	SQ1	Baseline	5.4	56.9	34.08			
		Q1 2026	6.5	0.05	19	0.19	25	1.22
2.	SQ2	Baseline	4.8	45.11	35.65			
		Q1 2026	6.9	0.06	10	0.21	34	1.37
3.	SQ3	Baseline	4.7	30.68	36.01			
		Q1 2026	6.7	0.08	17	0.22	33	1.3
4.	SQ4	Baseline	7.8	22.17	0.05			
		Q1 2026	7.2	0.09	8	0.27	28	1.65
5.	SQ5	Baseline	4.5	45.11	33.59			
		Q1 2026	6.8	0.07	11	0.25	32	1.51
Package 3								
Satkhira- Rupsha TL								
6.	SQ6	Baseline						
		Q2 2026	6.5	1.48	12.31	0.17	35.71	0.92
7.	SQ7	Baseline						
		Q2 2026	6.3	1.5	13.63	0.12	36.39	0.88
8.	SQ8	Baseline						
		Q2 2026	6.2	1.89	8.35	0.24	35.53	1
9.	SQ9	Baseline						
		Q2 2026	6.7	2.45	20.68	0.2	53.45	0.96
Satkhira- Manirampur TL								
10.	SQ10	Baseline						
		Q2 2026	6.4	1.94	9.23	0.08	45.67	0.8
11.	SQ11	Baseline						
		Q2 2026	6.3	1.03	10.99	0.24	88.66	0.84
12.	SQ12	Baseline						
		Q2 2026	6.8	1.58	7.91	0.43	31.82	1.2
Kushtia- Meherpur TL								
13.	SQ13	Baseline						

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/kg	mg/kg	mg/kg	mg/kg	%
		Q2 2026	6.2	0.26	4.83	0.16	60.67	1.24
14.	SQ14	Baseline						
		Q2 2026	6.6	1.42	7.91	0.15	44.72	1.04
15.	SQ15	Baseline						
		Q2 2026	6.7	1.36	2.03	0.06	60.32	1.32
16.	SQ16	Baseline						
		Q2 2026	6	1.46	7.91	0.14	47.8	0.76
17.	SQ17	Baseline						
		Q2 2026	6.3	2.11	10.99	0.2	52.42	1
Package 4								
Bagerhat-Pirojpur-Bhandaria TL								
18.	SQ18	Baseline	6.1	18.7	10.3	0.39	14.7	0.54
		Q2 2026	7	2.76	0	3.91	105.61	1.06
Purba Sadipur- Domar TL								
19.	SQ19	Baseline	5.1	13.8	9.1	0.38	8.9	0.38
		Q2 2026	6	1.57	0	3.51	91.32	1.49
Niamatpur- Patnitola TL								
20.	SQ20	Baseline	5.7	8.5	7.9	0.44	11.6	0.39
		Q2 2026	7	2.6	0	3.89	91.32	0.16
Gopalganj-Shibchar TL								
21.	SQ21	Baseline						
		Q2 2026	7.6	1.82	3.73	3.89	104.66	0.55
Package 5								
400/230 kV GIS Substation at Kaliganj, Gazipur								
22.	SQ22	Baseline	6.1	2.71	6.12	0.68	39.32	7.43
		Q2 2026	6.8	3.18	6.52	0.56	28.12	10.35
23.	SQ23	Baseline	5.9	3.07	9.12	0.83	41.23	6.21
		Q2 2026	6.8	3.25	9.76	0.87	43.12	6.55
24.	SQ24	Baseline	6.6	2.74	5.23	0.57	27.12	12.28
		Q2 2026	6.8	3.22	5.56	0.59	29.18	11.19
25.	SQ25	Baseline	5.9	2.93	7.13	0.76	49.32	10.43

SL No	Code	Period	Parameters Concentration					
			PH	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
				mg/kg	mg/kg	mg/kg	mg/kg	%
		Q2 2026	6.4	3.25	7.21	0.81	51.38	11.45
Package 6								
400/230/132 KV GIS Substation at Purbachal								
26.	SQ26	Baseline	6.3	2.54	7.31	0.72	46.63	9.47
		Q2 2026	6.8	4.72	7.56	0.69	47.14	8.23
27.	SQ27	Baseline	6.1	3.34	5.31	0.67	39.63	11.47
		Q2 2026	6.8	5.77	6.92	0.61	38.14	9.53
28.	SQ28	Baseline	5.9	3.17	6.21	0.81	52.61	8.12
		Q2 2026	6.4	4.91	5.65	0.73	51.29	8.33
29.	SQ29	Baseline	6.7	1.93	4.11	0.57	23.14	12.97
		Q2 2026	6.9	4.91	5.18	0.63	21.47	13.82
Package 7								
30.	SQ30	Baseline	7.2	1.37	1.59	0.89	0.23	0.68%
		Q2 2026	6.7	1.38	4.22	0.4	27.39	10.09
31.	SQ31	Baseline	7.6	4.36	2.61	0.41	2.19	0.83%
		Q2 2026	6.5	1.89	3.62	0.35	38.03	9.86
32.	SQ32	Baseline	7.5	7.23	3.24	0.61	3.4	0.84%
		Q2 2026	5.4	2.15	4.57	0.38	29.32	10.49
33.	SQ33	Baseline	7.2	2.16	1.21	0.13	0.32	0.80%
		Q2 2026	6.2	1.93	4.79	0.26	35.61	9.16
34.	SQ34	Baseline	7.6	5.76	2.66	0.31	1.27	0.88%
		Q2 2026	6	2.47	3.83	0.43	30.44	11.54
Dutch Standards[8]			**-**	**36**	**85**	**0.8**	**100**	**-**

Source: Periodic Environmental Baseline Monitoring Report Jan-Jun 2026 (Package 1,3,4,5,6 and 7)

BDL= Below Detection Limit

NYS- Not yet submitted

[8] 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 of Visit	Type and Purpose of the Visit	Location(s) Visited	EA, IA, Consultant Staff Participating	Key Issues Identified	Corrective Actions and Follow-up	Follow Up Dates	Responsible	Status
1.	20.01.2026	Physical environmental and EHS inspection	Satkhira–Rupsha TL	EQMS experts, Contractor EHS staff, Power Grid	Incomplete boundary fencing and access control	Boundary initiated and maintained using cautions tap (Annexure 11)	16.02.2026	Contractor and ESU	Closed
2.	21.01.2026	Physical environmental and EHS inspection	Satkhira–Manirampur TL	EQMS experts, Contractor EHS staff, Power Grid	Waste segregation bins missing	Bins installed; waste removal arranged (Annexure 9)	18.02.2026	Contractor and ESU	Closed
3.	19.01.2026	Physical environmental and EHS inspection	Kushtia–Meherpur TL	EQMS experts, Contractor EHS staff, Power Grid	Waste segregation bins missing	Segregated bin made available (Annexure 9)	22.02.2026	Contractor and ESU	Closed
4.	18.05.2026	Environmental and EHS supervision	Packages-5 & 6 Substations	EQMS experts, Contractor EHS staff, Power Grid	Inconsistent dust control during dry weather	Frequency of water spray increased during day time (Annexure 11)	08.06.2026	Contractor and ESU	Closed
5.	22.04.2026-24.04.2026	Environmental and EHS supervision	Purba Sadipur–Domar & Domar–Hatibandha TL	EQMS experts, Contractor EHS staff, Power Grid	No significant observations were identified	-	-		-

SN	Date of Visit	Type and Purpose of the Visit	Location(s) Visited	EA, IA, Consultant Staff Participating	Key Issues Identified	Corrective Actions and Follow-up	Follow Up Dates	Responsible	Status
6.	23.01.2026	Environmental and EHS inspection	Manirampur Substation	EQMS experts, Contractor EHS staff, Power Grid	Dust generation and lack of safety signs	Task specific Safety signs were installed, and water sprinkling was maintained during day time (Annexure 22)	06.02.2026	Contractor and ESU	Closed
7.	23.01.2026	Environmental and EHS inspection	Phultola Substation	EQMS experts, Contractor EHS staff, Power Grid	Waste segregation bins missing	Segregated bin made available (Annexure 9)	08.02.2026	Contractor and ESU	Closed
8.	23.01.2026	Environmental and EHS inspection	Rupsha Substation	EQMS experts, Contractor EHS staff, Power Grid	Lack of safety signage and safety boots	Task specific safety signage was installed at some sites, and safety boots were available for workers (Annexure 22)	13.03.2026	Contractor and ESU	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 June 2026, 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	Approved Budget (BDT)	Expenditure during Jan–Jun 2026 (BDT)	Cumulative Expenditure up to Jun 2026 (BDT)	Amount Paid (BDT)	Balance Available (BDT)	Supporting Evidence	Reason for Underutilization	Utilization Plan / Target Date
Package 1	5,389,362	No claims were received during the reporting period	To be confirmed	To be confirmed	To be calculated after verification	Contract/BOQ, expenditure records, monitoring reports, invoices/payment certificates	No separate EMP claim was submitted up to June 2026; EMP costs are to be incurred/claimed in accordance with contractual implementation and actual safeguard activities	Not disclosed yet
Package 3	4,568,918	No claims were received during the reporting period	To be confirmed	To be confirmed	To be calculated after verification	Contract/BOQ, expenditure records, monitoring reports, plantation records, invoices/payment certificates	No separate EMP claim was submitted up to June 2026; expenditure is linked to implementation of safeguard activities and contractual progress	Not disclosed yet
Package 4	931,552	No claims were received during the reporting period	To be confirmed	To be confirmed	To be calculated after verification	Contract/BOQ, expenditure records, monitoring reports, plantation records, invoices/payment certificates	No separate EMP claim was submitted up to June 2026; expenditure will be incurred in line with pending and ongoing safeguard activities	Not disclosed yet
Packages 5 & 6	Included in overall contract price*	No claims were received during the reporting period	To be confirmed	To be confirmed	To be confirmed	Contract/BOQ, contractor expenditure records, monitoring reports, PPE inventories, inspection records	EMP expenditure is incorporated within the overall contract price rather than identified as a separate line item	Not disclosed yet
Package 7	Included in overall contract price*	No claims were received during the reporting period	To be confirmed	To be confirmed	To be confirmed	Contract/BOQ, contractor expenditure records, monitoring reports, PPE inventories, inspection records	EMP expenditure is incorporated within the overall contract price rather than identified as a separate line item	Not disclosed yet

Package	Approved Budget (BDT)	Expenditure during Jan–Jun 2026 (BDT)	Cumulative Expenditure up to Jun 2026 (BDT)	Amount Paid (BDT)	Balance Available (BDT)	Supporting Evidence	Reason for Underutilization	Utilization Plan / Target Date
Package 8	Included in overall contract price*	To be confirmed	To be confirmed	To be confirmed	To be confirmed	Contract/BOQ, O&M records, CAP records, invoices/payment records	Package 8 became effective on 30 June 2026; expenditure will be incurred as the package progresses	Not disclosed yet
Total	15,889,832 for Packages 1, 3 & 4	To be confirmed	To be confirmed	To be confirmed	To be confirmed	Financial records and supporting safeguard documentation	See package-wise explanation above	

Source: ESU, DWZTGEP, Power Grid Bangladesh PLC , July 2026

4.2 Labor Management

88. During the reporting period, contractors across Packages 1, 3,4,5,6 and 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.

89. 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: (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
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 Jan- Jun 2026 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. A new waste register format developed as per ADB recommendations. Contractor should maintain the register presented in Annexure 43.

Table 4-5: Types of Material/ Waste

Sl. No.	Type of Material / Waste	Approximate Amount	Unit	Source / Package	Disposal / Destination
1	Piling mud / slurry	~400-550	m^3	Pile foundation works (Pkgs-1,3,4,6)	Municipal waste dealer / approved dumping area
2	Excavated soil / spoil	~900–1,100	m^3	Tower & substation civil works	Reused on site; excess to municipal waste dealer
3	Scrap steel / conductor bits	~0.3–0.6	ton	Tower erection yards	Authorized recycler
4	Plastic waste	~270–340	kg	Camps & substations	Municipal waste dealer
5	Cement bags	~790–850	nos	Substation construction	Municipal waste dealer / recycler
6	Carton / packing boxes	~200–250	kg	Equipment delivery areas	Municipal waste dealer
7	Used hand gloves	~220–300	pairs	Construction fronts	Municipal waste dealer
8	PP rope / binding material	~120–150	kg	TL works	Municipal waste dealer
9	Printing cartridges	~33–40	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)	~4–5	ton	Labor camps	Municipal waste dealer
13	Wastewater / sludge	-	kL	Camps & batching yards	Municipal contractor

4.4 Environmental Health and Safety

During reporting period, toolbox trainings (TBT) were conducted in Package 1, 3, 4,5,6 and 7 and details of the TBT mentioned in Table 4-6.

Table 4-6: TBT Imparted during reporting period

Month	No. of TBT Conducted						No. of Participants						Remarks
	P1	P3	P4	P5	P6	P7	P1	P3	P 4	P5	P6	P7	
Jan- 26	6	18	22	60	8	3	66	167	200	177	120	40	
Feb- 26	6	24	36	50	13	3	62	112	152	240	130	36	
Mar- 26	4	8	12	52	6	2	26	28	206	246	160	26	
Apr- 26	12	12	36	62	8	3	78	88	189	240	134	47	
May- 26	12	22	38	52	12	3	82	54	140	260	210	35	
Jun- 26	12	24	23	46	14	2	62	65	107	210	180	33	
Total	52	108	167	322	61	16	376	514	994	1373	934	217	

4.5 Health and Safety Status

Health and Safety considerations during reporting period are mentioned in Table 4-7; Incident details presented in Table 4-8, Register presented in Annexure 30 and new register format presented in Annexure 44 for all packages.

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 PPE (Safety shoes) was not found in Package 5, some of the workers were found in normal shoes.	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).	Proper PPE should be available at all sites Safety shoe should be strictly ensured in site during construction activities	Security conditions were well maintained at every site through lighting and surveillance cameras and night guards.
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 found at Package 6	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.	Package 1, 3, 4, 5, 6 and 7	PPE Inventories should be available at every construction site and substation.	It should be ensured by the EHS manager of contractor that all workers are using PPE properly while working.	
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 available for all construction sites and substations	No actions required during reporting period	

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
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 1, 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.	No actions required during reporting period	Contact lists for emergency support were found at all sites (Annexure-11: Ensuring OHS and Emergency Contact Information)
Incidents	16 health and safety incidents were recorded during January–June 2026 in Packages 5, 6 and 7.	Packages 5, 6 and 7	Proper PPE should be maintained before work. OHS and first-aid training should be provided regularly. Pre-work briefing should be conducted at all sites. Training on proper and safe working techniques should be conducted regularly for all workers.	Each incident was recorded and corrective actions were taken by the respective contractors. Incident classification and closure status have been reconciled with the package-wise Incident Register in Annexure-30.	The incidents include near miss, first-aid case, medical-treatment case, restricted-work case and lost-time injury. No fatality was recorded during the reporting period. Detailed package-wise incident information is provided in Table 4-8 and register presented in Annexure-30.

Table 4-8: Incident occurred during Jan- Jun 2026

Sl. No.	Package	Date	Classification	Closure Date	Supporting Evidence
1	Package 5	07.01.2026	Near Miss	07.01.2026	Annexure-30
2		03.02.2026	First Aid case	03.02.2026	Annexure-30
3		25.02.2026	Medical Treatment Case	25.02.2026	Annexure-30
4		24.03.2026	Medical Treatment Case	24.03.2026	Annexure-30

Sl. No.	Package	Date	Classification	Closure Date	Supporting Evidence
5		02.04.2026	Near Miss	02.04.2026	Annexure-30
6		17.04.2026	First Aid case	17.04.2026	Annexure-30
7		05.05.2026	Near Miss	05.05.2026	Annexure-30
8		20.05.2026	First Aid case	20.05.2026	Annexure-30
9		10.06.2026	Medical Treatment Case	10.06.2026	Annexure-30
10	Package 6	08.01.2026	Near Miss	08.01.2026	Annexure-30
11		23.01.2026	Medical Treatment Case	23.01.2026	Annexure-30
12		15.03.2026	First Aid case	15.03.2026	Annexure-30
13		02.04.2026	First Aid case	02.04.2026	Annexure-30
14		17.05.2026	First Aid case	17.05.2026	Annexure-30
15		09.06.2026	Near Miss	09.06.2026	Annexure-30
16	Package 7	03.02.2026	First Aid case	03.02.2026	Annexure-30

Note: Incidents Classification

Classification	Definition
1. Near Miss	An unsafe event occurred that could have caused injury or damage, but nobody was injured.
2. First Aid Case (FAC)	A worker suffers a minor injury that only requires basic first aid and does not require medical treatment beyond first aid.
3. Medical Treatment Case (MTC)	An injury requires medical treatment beyond basic first aid, but the worker does not lose working time in the sense of an LTI.
4. Restricted Work Case (RWC)	The worker can continue working but cannot perform their normal duties or is assigned modified/restricted duties because of the injury.
5. Lost Time Injury (LTI)	The injury results in the worker being unable to work on the next scheduled workday or subsequent days.
6. Fatality	A work-related incident results in death.

4.6 Meaningful Consultation and Grievance Redress

90. The PMU keeps records of all the grievances in a site-specific logbook (Annexure-16: Complaint 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. During this reporting period no grievance has been raised. Consultation pictures are shown in Annexure-18: Community Engagement. A total of five (5) community-level consultation meetings were conducted across Dhaka, Domar, Nilphamari, Khulna and Satkhira. Overall, 28 participants attended the consultations. Only one female participant was recorded during these consultations.

Table 4-9: Summary of Consultation Conducted Inception to June 2026

Package	Cumulative no. of consultation conducted till Inception to June 2026	Cumulative no. of participant till Inception to June 2026		
		Male	Female	Total
Package 1	2	13	0	13
Package 2	8	38	6	44
Package 3	54	420	0	420
Package 4	45	400	1	401
Package 5	4	42	0	42
Package 6	4	37	0	37
Package 7	15	144	0	144

Table 4-10: Consultation meetings held during January– June 2026

Package	Consultation Date	Location	Consultation Type	Issue discussed	No. of Participants
Package 3 and 4	27/01/2026	Nilphamari	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	7
	28/01/2026	Domar	FGD with local communities		9
	06/03/2026	Khulna	FGD with local communities		4
	10/04/2026	Satkhira	FGD with local communities		5
	27/04/2026	Khulna	FGD with local communities		3

4.6.1 Findings of the Consultations

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

Stakeholders	Findings
Local People, Landowners, Sharecroppers and Workers	• Participants supported the project and appreciated the consultation process. • Participants emphasized that compensation for tower footing areas should be provided in accordance with government procedures. • Participants noted that any crop losses would be temporary and seasonal during the construction phase. • Participants acknowledged that construction activities may cause short-term impacts such as dust, noise, and temporary access restrictions, which should be properly managed. • Participants encouraged the project to implement appropriate environmental protection measures, including dust suppression, waste management, and protection of agricultural land. • Participants confirmed that no permanent displacement or relocation is expected due to the project. • Participants requested advance notice before construction activities and continued coordination with the local community.

4.7 Training and Awareness Activities

92. During this reporting period a total of 70 training initiated, among which 43 training initiated in Package 4, 18 training conducted in Package 5 and 6 and 9 training initiated in Package 7.

Table 4-11: Summary of training programs initiated Since Inception to June 2026

Package	Cumulative no. of training program Since Inception to June 2026	Cumulative no. of participant Since Inception to June 2026		
		Male	Female	Total
Package 1	9	96	0	96
Package 2	23	241	0	241
Package 3	48	766	0	766
Package 4	229	2838	0	2838
Package 5	27	1766	0	1766
Package 6	27	1400	0	1400
Package 7	39	891	0	891

Table 4-12: Details of training programs imparted during the reporting period

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Package 4					
Traffic Rule Training	21.01.2026	Staff and Worker	20	0	20
Hot Work	03.01.2026	Staff and Worker	20	0	20
Manual material handling	06.01.2026	Staff and Worker	10	0	10
T&P/SOP of Hydra	14.01.2026	Fitter, Helper, etc,	15	0	15
POSH Awareness training	22.01.2026	Fitter, Helper, etc,	10	0	10

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
Manual material handling	07.01.2026	Fitter, Helper, etc,	10	0	10
Work at height Training	02.02.26	Fitter, Helper, etc,	60	0	60
Material handling Training	15.02.2026	Fitter, Helper, etc,	40	0	40
Safe crane lifting/Rigging training.	16.02.2026	Fitter, Helper, etc,	50	0	50
Site housekeeping Awareness training	18.02.2026	Fitter, Helper, etc,	40	0	40
SOP Training	18.02.2026	Fitter, Helper, etc,	40	0	40
Work at height Training	20.02.2026	Fitter, Helper, etc,	50	0	50
1st aid training	22.02.2026	Fitter, Helper, etc,	50	0	50
PPE Awareness training	23.02.2026	Fitter, Helper, etc,	50	0	50
Health Awareness training	28.02.2026	Fitter, Helper, etc,	61	0	61
Classification of Fire	30.03.2026	Staff and Worker	10	0	10
Work at height Training	10.03.2026	Fitter, Helper, etc,	12	0	12
Work at height Training	05.03.2026	Fitter, Helper, etc,	60	0	60
site housekeeping training	09.03.2026	Fitter, Helper, etc,	50	0	50
pre task meeting	10.03.2026	Fitter, Helper, etc,	50	0	50
1st aid training	11.03.2026	Fitter, Helper, etc,	40	0	40
PPE Awareness training	18.03.2026	Fitter, Helper, etc,	40	0	40
Material handling Training	05.04.2026	Fitter, Helper, etc,	40	0	40
Work at height Training	10.03.2026	Fitter, Helper, etc,	45	0	45
Material handling Training	16.03.2026	Fitter, Helper, etc,	19	0	19
Work at height Training	17.03.2026	Fitter, Helper, etc,	25	0	25
1st aid training	19.04.2026	Fitter, Helper, etc,	11	0	11
site housekeeping training	25.03.2026	Fitter, Helper, etc,	19	0	19
PPE Awareness training	27.04.2026	Fitter, Helper, etc,	15	0	15
Health awareness training	28.04.2026	Fitter, Helper, etc,	9	0	9
Manual material handling	01.05.2026	Fitter, Helper, etc,	18	0	18
Worker welfare facility Awareness training	09.05.2026	Staff and Worker	15	0	15
Pre task meeting	10.05.2026	Fitter, Helper, etc,	17	0	17
1st aid training	13.05.2026	Fitter, Helper, etc,	18	0	18
site housekeeping training	16.05.2026	Fitter, Helper, etc,	13	0	13
GBV Awareness training	20.05.2026	Staff and Worker	16	0	16
PPE Awareness training	23.05.206	Fitter, Helper, etc,	14	0	14
Emergency respond plan training	14.05.2026	Staff and Worker	17	0	17
Manual material handling	13.06.26	Fitter, Helper, etc,	15	0	15
1st aid training	15.06.2026	Fitter, Helper, etc,	10	0	10
Work at height Training	21.04.2026	FItter	13	0	13
Use of PPE awareness training	23.06.2026	Fitter, Helper, etc,	13	0	13
Site housekeeping awareness training	27.06.2026	Fitter, Helper, etc,	10	0	10
Package 5					
Gang Induction	05.01.2026	Staff and Worker	80		80
Fire Fighting Training	14.03.2026	Staff and Worker	15		15
EHS Induction	20.01.2026	FItter	40		40
EHS Induction	02.02.2026	Fitter, Helper, etc,	98		98

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
EHS Induction	05.02.2026	Fitter, Helper, etc,	108		108
Staff Induction	10.05.2026	Staff	100		100
Electrical Training	15.06.2026	Staff and Worker	26		26
Gang Induction	18.05.2026	Staff and Worker	40		40
Fire Fighting Training	15.04.2026	Staff and Worker	104		104
Package 6					
Gang Induction	18.01.2026	Staff and Worker	62		62
Fire Fighting Training	13.02.2026	Staff and Worker	42		42
EHS Induction	15.02.2026	FItter	87		87
EHS Induction	06.03.2026	Fitter, Helper, etc,	75		75
EHS Induction	08.03.2026	Fitter, Helper, etc,	62		62
Staff Induction	13.04.2026	Staff	71		71
Electrical Training	21.04.2026	Staff and Worker	71		71
Gang Induction	03.05.2026	Staff and Worker	62		62
Fire Fighting Training	12.06.2026	Staff and Worker	70		70
Package 7					
Gang Induction	01.01.2026	Staff and Worker	23		23
Fire Fighting Training	01.03.2026	Staff and Worker	14		14
EHS Induction	01.02.2026	FItter	3		3
EHS Induction	19.02.2026	Fitter, Helper, etc,	15		15
EHS Induction	05.04.2026	Fitter, Helper, etc,	18		18
Staff Induction	31.05.2026	Staff	4		4
Electrical Training	04.05.2026	Staff and Worker	12		12
Gang Induction	01.06.2026	Staff and Worker	23		23
Fire Fighting Training	25.06.2026	Staff and Worker	23		23

4.8 Status of CAP Raised by ADB

93. 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 4-13.

Table 4-13: 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 during last reporting period (Jul-Dec 2025). 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 found available at all sites
6	Worker Welfare	Introduce scheduled 30-minute rest breaks at all construction sites.	Complied	Schedule for half an hour rest were well maintained at all construction sites
7	Oil Spill Prevention	Install secondary containment systems at all locations with potential oil leakage.	Complied	Secondary containers were found most of the sites
8	Noise Management	Implement noise control measures to ensure levels remain below 85 dBA during piling.	Partially Complied	Ear plugs were not available at Package 5 and Rupsha Substation under Package 7

Sl. No.	Observation Area	Recommended Corrective Action	Status	Remarks
9	Tree Plantation Plan (TPP)	Prepare and implement a comprehensive TPP; update and report the tree inventory in EMR.	Partially Complied	TPP implementation is ongoing in Package 3 and 4. Tree plantation inventory is still under preparation
10	EHS Monitoring Frequency	Ensure monthly EHS site monitoring by EQMS or designated parties across all packages.	Partially Complied	EHS monitoring was conducted in monthly basis during this reporting period by EQMS except the month of March
11	EMP Compliance	Improve waste management, fencing, PPE usage, and ensure emergency contacts are posted especially in Packages 3, 5, and 6.	Partially Complied	Proper PPE being used at all sites (Annexure-23: Status of CAP) Safety shoes should be strictly ensured for all workers of Package 5
12	Environmental Quality Testing	Conduct periodic environmental quality tests for Packages 1, 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.	Complied	Salinity, TPH, Temperature, and Hardness were tested for all packages
14	Good Practices Reinforcement	Continue PPE logs, toolbox talks, and safety officer deployment; expand to all packages.	Complied	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.	Partially Complied	EQMS is trying to improve the EMR with the recommendations of ADB and ESU team of Power Grid

Among the 16 ADB recommended corrective actions eight considerations were complied, two (02) considerations were being complied, five consideration was partially complied, and one consideration was not complied. The timeline for converting partially/not complied to complied are mentioned in the table below.

Table 4-14: Corrective action plan for Jul- Dec 2026

Sl. No.	Corrective Action / Issue	Package / Location	Responsible	Start Date	Required Action	Target Date	Required Evidence	Status
1	Establish methodology and calculate/report annual CO_2 emission reductions as per PDMF	P1–P7	PMU / EQMS / Contractors	Jul 2026	Establish the methodology, collect required data, and calculate annual CO_2 emission reductions	Dec 2026	Calculation sheet and EMR	Not Complied
2	Complete impermeable bund/secondary containment works at remaining existing substations	P8 – Bagerhat, Bhandaria, Purba Sadipur & Niamatpur	Power Grid O&M Division	Jul 2026	Complete required impermeable bund and secondary containment works	Dec 2026	Completion report and dated photographs	Being Complied
3	Complete environmental monitoring and submit final report for Package 4 by end of November 2026 and include all results in the next EMR	P4	Contractor / EQMS / PMU	Jul 2026	Complete sampling and laboratory testing and incorporate the results in the next EMR	Sep 2026	Laboratory reports and monitoring records	Open
4	Finalize and obtain approval of the Tree Plantation Plan and complete/update plantation inventory	P3 & P4	PMU / Contractors / EQMS	Jul 2026	Obtain approval of TPP and update the tree plantation inventory	Dec 2026	Approved TPP, plantation records and photographs	Partially Complied
5	Provide required PPE, including ear protection, at all active work locations	P5 & P7 – Rupsha Substation and other active sites	Contractors / EHS Officers	Jul 2026	Ensure required PPE and ear protection are available and used by workers	Aug 2026	PPE inventory, issue records and photographs	Partially Complied
7	Update EMP budget utilization with actual expenditure and remaining balance	P1, P3, P4 and other applicable packages	PMU / Contractors / EQMS	Jul 2026	Verify actual expenditure, certified/paid amounts, balance and prepare a utilization plan	Sep 2026	Expenditure records, payment certificates and revised budget table	Open
8	Complete outstanding waste-management records	P1, P3–P7	Contractors / EQMS	Jul 2026	Compile package-wise waste quantities,	Sep 2026	Waste registers, transfer records	Open

Sl. No.	Corrective Action / Issue	Package / Location	Responsible	Start Date	Required Action	Target Date	Required Evidence	Status
					transfer records, disposal destinations and supporting receipts		and disposal receipts	
9	Maintain regular EHS inspections and verify closure of recurring issues	P1, P3–P7	EQMS / Contractors / PMU	Jul 2026	Conduct follow-up inspections and document closure of fencing, waste, dust, signage and PPE issues	Dec 2026	Inspection records and dated before/after photographs	Ongoing
10	Monitor all the active sites and if there are any construction materials left after the completion of construction	P1, P3- P7	Contractors / PMU	Aug 2026	Dust suppression measures should be initiated; Cover all the materials till safe removal from site	Dec 2026	Photographic evidence	Open

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 4-15 and pictorial evidence is depicted in Annexure-34: Status of CAP of the Existing Substations.

Table 4-15: Status of CAP of the Existing Substations

Sl. No.	Substation	Issue Identified	Required Action	Responsible	Action Plan Ref. & Date	Current Progress	Reason for Delay / Gap	Interim O&M Control	Revised Target Date	Evidence / Reference	Status
1	**Bagerhat**	Oil leakage / inadequate oil containment	Complete required oil containment/retrofitting measures	GMD / Power Grid O&M	GMD-BAG-02 / 22.07.2025	Transformer replacement completed; remaining required measures to be verified	Remaining works linked to existing O&M/package scope	Regular inspection and spill prevention measures to be maintained until permanent measures are completed	31.12.2026	Annexure-34: Status of CAP of the Existing Substations	Partially Complied
2	**Purba Sadipur**	Impermeable bund / oil containment	Complete required impermeable bund and containment measures	GMD / Power Grid O&M	GMD-PSD-02 / 12.08.2025	Pending	Package 8 work has not commenced	Maintain existing spill-prevention and secondary-containment measures and conduct regular inspection	31.12.2026	Annexure-34: Status of CAP of the Existing Substations	Being Complied

Sl. No.	Substation	Issue Identified	Required Action	Responsible	Action Plan Ref. & Date	Current Progress	Reason for Delay / Gap	Interim O&M Control	Revised Target Date	Evidence / Reference	Status
3	**Bhandaria**	Impermeable bund / oil containment	Complete required impermeable bund and containment measures	GMD / Power Grid O&M	GMD-BHA-02 / 05.09.2025	Pending	Package 8 work has not commenced	Maintain interim containment and spill-prevention controls	31.12.2026	Annexure-34: Status of CAP of the Existing Substations	Being Complied
4	**Niamatpur**	Impermeable bund / oil containment	Complete required impermeable bund and containment measures	GMD / Power Grid O&M	GMD-NIA-01 / 18.09.2025	Pending	Package 8 work has not commenced	Maintain interim containment and spill-prevention controls	31.12.2026	Annexure-34: Status of CAP of the Existing Substations	Being Complied

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 one (01) consideration were complied during this monitoring period.

Table 4-16: Status of unresolved CAP of last ADB Mission

Sl. No.	Recommended Corrective Action	Present Status	Remarks
1.	No progress on the tree plantation plan (TPP)	Partially Complied	TPP implementation is ongoing in Package 3 and 4 Link of approved TPP of Package 3 & 4 added in Annexure 41 Tree Plantation Inventory format (Annexure 42) shared with contractor and the preparation of the inventory is under progress

4.11 Good Practices During January– June 2026

94. During the reporting period (January–June 2026), the Project continued to promote several good environmental and social practices as part of its commitment to sustainable construction and community engagement. Priority was given to the recruitment of local community members to support project activities, thereby creating employment opportunities and strengthening local participation. Under the Rupsha Substation, a local woman was employed, demonstrating the project's commitment to promoting inclusive employment. In addition, four out of six security personnel engaged at the Phultola Substation were recruited from the local Khulna community, contributing to local livelihood development.

95. In celebration of World Environment Day 2026, tree plantation programmes were organized under Package 4 at project sites. The programme involved project personnel, contractors, supervision consultants, and local stakeholders in planting native tree species to promote environmental conservation, improve local green cover, and enhance awareness of biodiversity protection.

96. The project also organized an environmental awareness and training programme in conjunction with the tree plantation campaign. The training focused on environmental protection, good housekeeping practices, occupational health and safety, and the importance of conserving natural resources during project implementation. These initiatives demonstrated the project's continued commitment to environmental stewardship, stakeholder engagement, and the promotion of sustainable construction practices beyond regulatory compliance. (Annexure-37: Good Practices)

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4.12 Performance Level on Environmental Supervision and Monitoring Result During Jan– Jun 2026

97. 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 complied 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 complied 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.

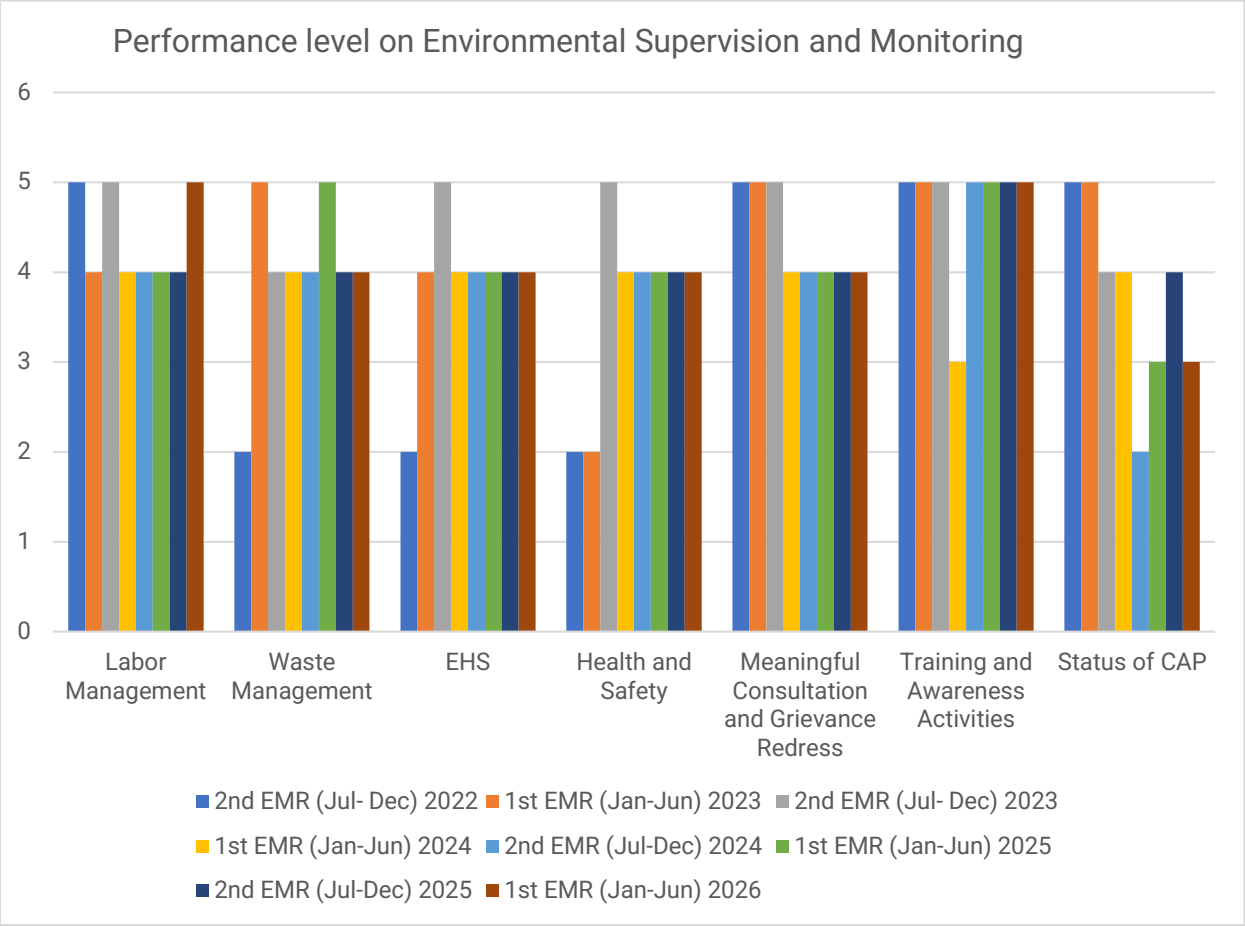
98. Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR results are mentioned in Table 4-17.

Table 4-17: Comparison of Performance level on Environmental Supervision and Monitoring Result of Current EMR (January- June 2026) 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	1st EMR (Jan-Jun) 2026
Labor Management	5	4	5	4	4	4	4	5
Waste Management	2	5	4	4	4	5	4	4
EHS	2	4	5	4	4	4	4	4
Health and Safety	2	2	5	4	4	4	4	4
Meaningful Consultation and Grievance Redress	5	5	5	4	4	4	4	4
Training and Awareness Activities	5	5	5	3	5	5	5	5
Status of CAP	5	5	4	4	3	3	4	3

Note: Ranking:
Satisfactory- 5
Moderately Satisfactory- 4
Need to Improve- 3
Not Satisfactory- 2
Immediate Action Required- 1

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



5 CONCLUSION

99. The implementation of the Dhaka and Western Zone Transmission Grid Expansion Project (DWZTGEP) continued during the January–June 2026 reporting period, with construction activities ongoing under Packages 1 and 3–7. Package 2 was fully commissioned and remained in the operation phase, and therefore environmental quality monitoring was not undertaken for this package during the reporting period. Package 8 became effective on 30 June 2026; however, no physical construction work had commenced by the end of the reporting period. Activities under Package 8 were limited to site survey, SLD/PSLD and layout/pre-section measurement works, with construction to commence only after approval of the SSEMP.

100. Environmental quality monitoring covering air, noise, surface water, groundwater and soil was conducted for Packages 1, 3, 4, 5, 6 and 7 during the reporting period. The results indicate that most monitored parameters complied with the applicable national standards; however, localized exceedances were identified and required continued follow-up. IFC EHS guideline exceedances for $PM_{2.5}$ and/or PM_{10} were recorded in Packages 3, 4, 5, 6 and 7, while localized noise exceedances against IFC/WHO guideline values were recorded in Packages 4, 6 and 7. The reported air and noise results remained within the applicable Bangladesh standards. Continued monitoring and site-specific mitigation measures are required to verify the effectiveness of controls at locations where exceedances were observed.

101. Surface-water monitoring identified localized exceedances of selected parameters in Packages 1, 3, 4, 5 and 6, including BOD, COD, TDS, oil and grease and/or DO. These results require continued review of potential sources, implementation of appropriate pollution control measures and follow-up monitoring. Groundwater quality was generally within the applicable standards, although localized exceedances were recorded, including arsenic, chloride and turbidity in Package 3; iron, manganese and turbidity at GW21 in Package 4; iron at GW22, GW23 and GW25 in Package 5; and iron and manganese at selected Package 7 locations. Package 6 groundwater results complied with the applicable standards. Continued groundwater monitoring is recommended at locations with observed exceedances to assess baseline comparison, potential sources and whether the observed conditions persist.

102. Soil-quality monitoring results for Packages 1, 3, 6 and 7 were generally within the applicable standards, while localized exceedances requiring continued attention were identified in Packages 4, 5 and 7. In Package 4, cadmium concentrations exceeded the applicable standard at all monitoring locations (SQ18–SQ21), while chromium exceeded the standard at SQ18 and SQ21. In Package 5, cadmium exceedances were recorded at SQ23 and SQ25. In Package 7, the pH value at SQ32 was below the applicable range. These localized exceedances will require verification against baseline conditions, assessment of potential sources and continued follow-up monitoring to determine whether the observed conditions persist.

103. Environmental supervision identified a number of site-specific issues relating to dust control, waste management, fencing, signage, PPE/ear protection, environmental monitoring and other EMP requirements. Corrective measures were implemented for several inspection findings, while open and partially complied actions remain under the CAP process. The revised CAP for July–December 2026 includes actions for carbon-emission reporting, completion of Package 4 next monitoring report before end of November 2026, tree plantation planning and inventory, PPE and ear protection, EMP budget utilization, waste-management records, environmental-quality exceedances and follow-up inspections. The CAP also includes outstanding actions for existing substations, including oil containment and spill-prevention measures.

104. Occupational health and safety management continued during the reporting period through PPE provision, toolbox meetings, pre-work briefings, first-aid arrangements, emergency preparedness and site inspections. Sixteen health and safety incidents were recorded during January–June 2026 in Packages 5, 6 and 7, comprising near misses, first-aid cases, medical-treatment cases, restricted-work cases and lost-time injuries; no fatality was recorded. The

incidents were recorded and corrective actions were taken by the respective contractors, with the incident classification and closure status reconciled with Annexure-30.

105. The GRM remained functional at the active construction packages, and no grievance were found during this reporting period. Five community-level consultation meetings were conducted during the reporting period, with discussions covering compensation, dust, noise, access, grievances, livelihoods and other community concerns. Training and awareness activities also continued across the project packages. Overall, environmental safeguard implementation during January–June 2026 remained generally satisfactory but subject to continued corrective action and strengthened follow-up. Priority for the next reporting period is to complete pending monitoring, verify the effectiveness of mitigation measures for environmental exceedances, close outstanding CAP actions, strengthen PPE/ear-protection compliance, complete required budget and waste-utilization records, and maintain interim environmental and O&M controls at existing substations. Package 8 shall remain under pre-construction control until the required SSEMP approval and baseline requirements are completed before physical construction begins.

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.*

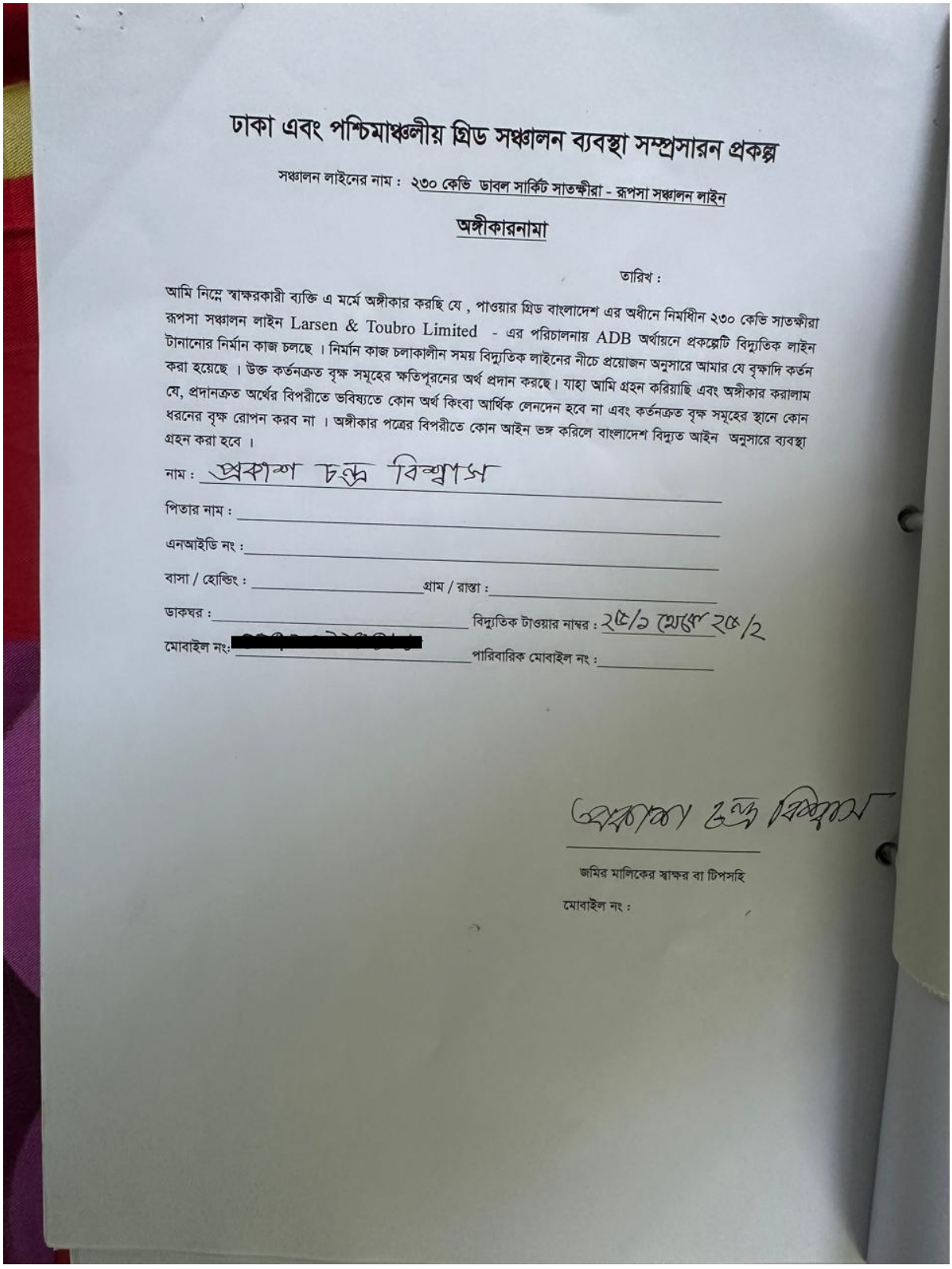
Annexure-8: Compensation Paid by the Contractor to the Local Community

A. Compensation Paid by the Contractor to the Local Community presented in Semi-annual SMR January– June 2026 link below

(https://docs.google.com/document/d/1Dc9nWY1SIwlnVU9lmQ10Nrwp90joibVk/edit?usp=drive_link&ouid=115311195179976857149&rtpof=true&sd=true).

B. List of Affected Persons for Tower Footing Area

https://drive.google.com/drive/folders/1pqzin5KIiiAsmrMLgKko1LZs8RcqUr2E?usp=drive_link



ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : প্রকাশ চন্দ্র বিশ্বাস

পিতার নাম : _____

এনআইডি নং : _____

বাসা / হোল্ডিং : _____ গ্রাম / রাস্তা : _____

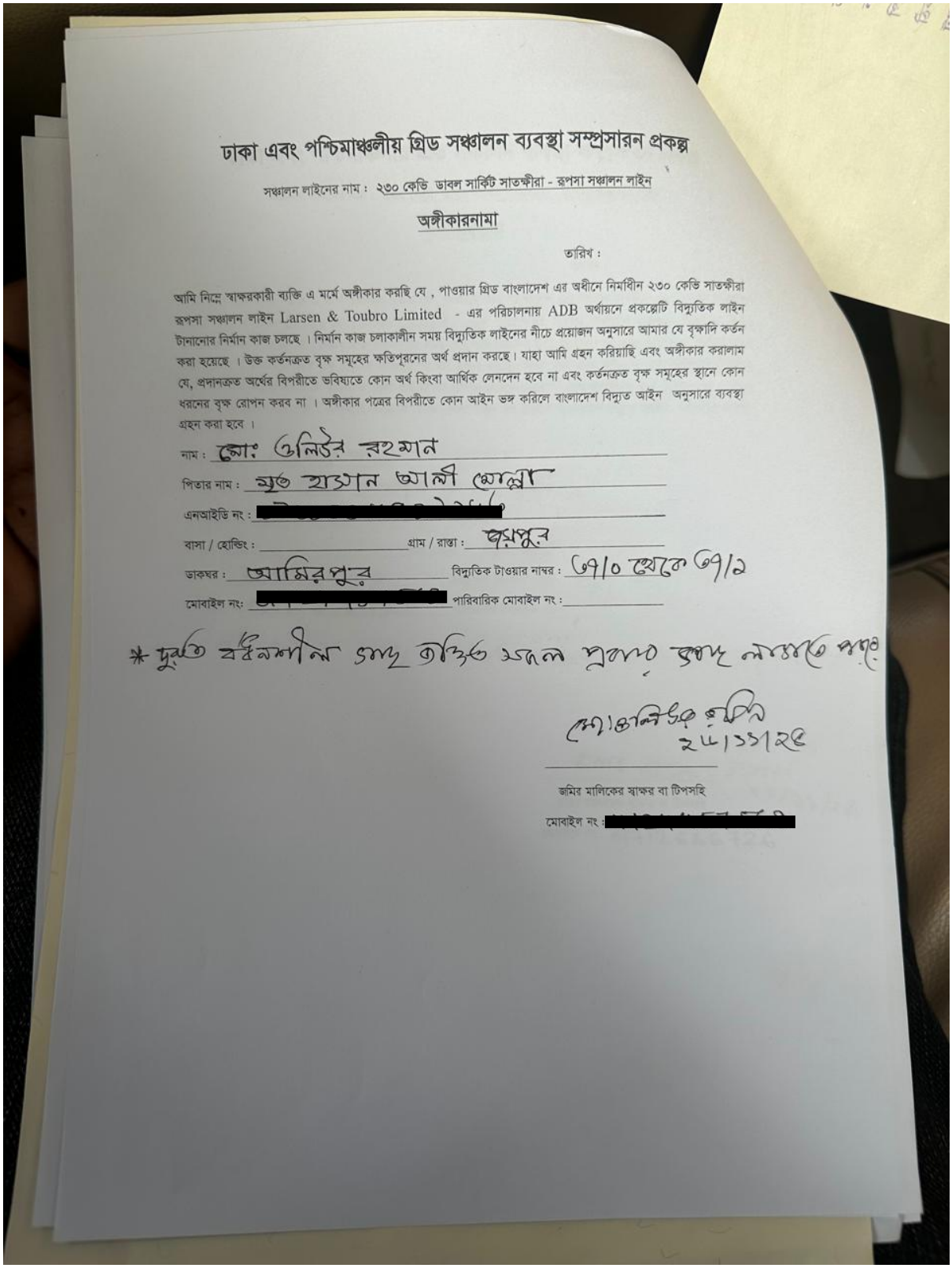
ডাকঘর : _____ বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

মোবাইল নং: [redacted] পারিবারিক মোবাইল নং : _____

প্রকাশ চন্দ্র বিশ্বাস

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :



ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রুপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রুপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : মোঃ ওলিউর রহমান

পিতার নাম : মৃত হাসান আলী মোল্লা

এনআইডি নং : [redacted]

বাসা / হোল্ডিং : _____ গ্রাম / রাস্তা : জয়পুর

ডাকঘর : আমিরপুর বিদ্যুতিক টাওয়ার নাম্বর : ৩৭/০ থেকে ৩৭/২

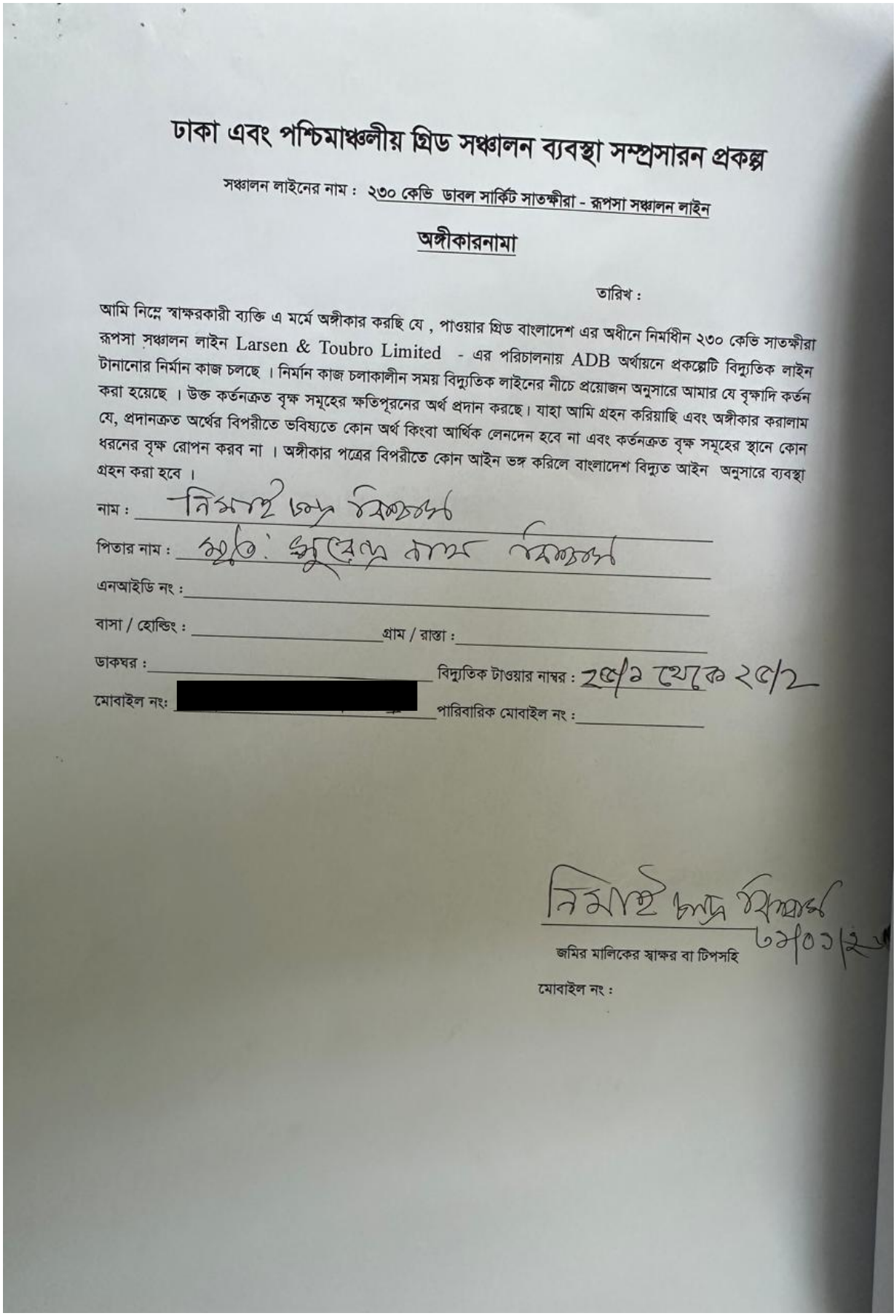
মোবাইল নং: [redacted] পারিবারিক মোবাইল নং : _____

* দুর্ঘত বর্ধিতশীল ফলদ তাত্ত্বিক সকল সুবিধা ক্ষতি পাবে।

মোঃ ওলিউর রহমান
২৫/১১/২৫

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং : [redacted]



ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : নিমাই চন্দ্র [illegible]

পিতার নাম : মৃত: [illegible]

এনআইডি নং :

বাসা / হোল্ডিং : গ্রাম / রাস্তা :

ডাকঘর : বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

মোবাইল নং: [redacted] পারিবারিক মোবাইল নং :

নিমাই চন্দ্র [illegible] ৬/১০/২০

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :

ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : স্বপন কুমার বিশ্বাস

পিতার নাম : _____

এনআইডি নং : _____

বাসা / হোল্ডিং : _____ গ্রাম / রাস্তা : _____

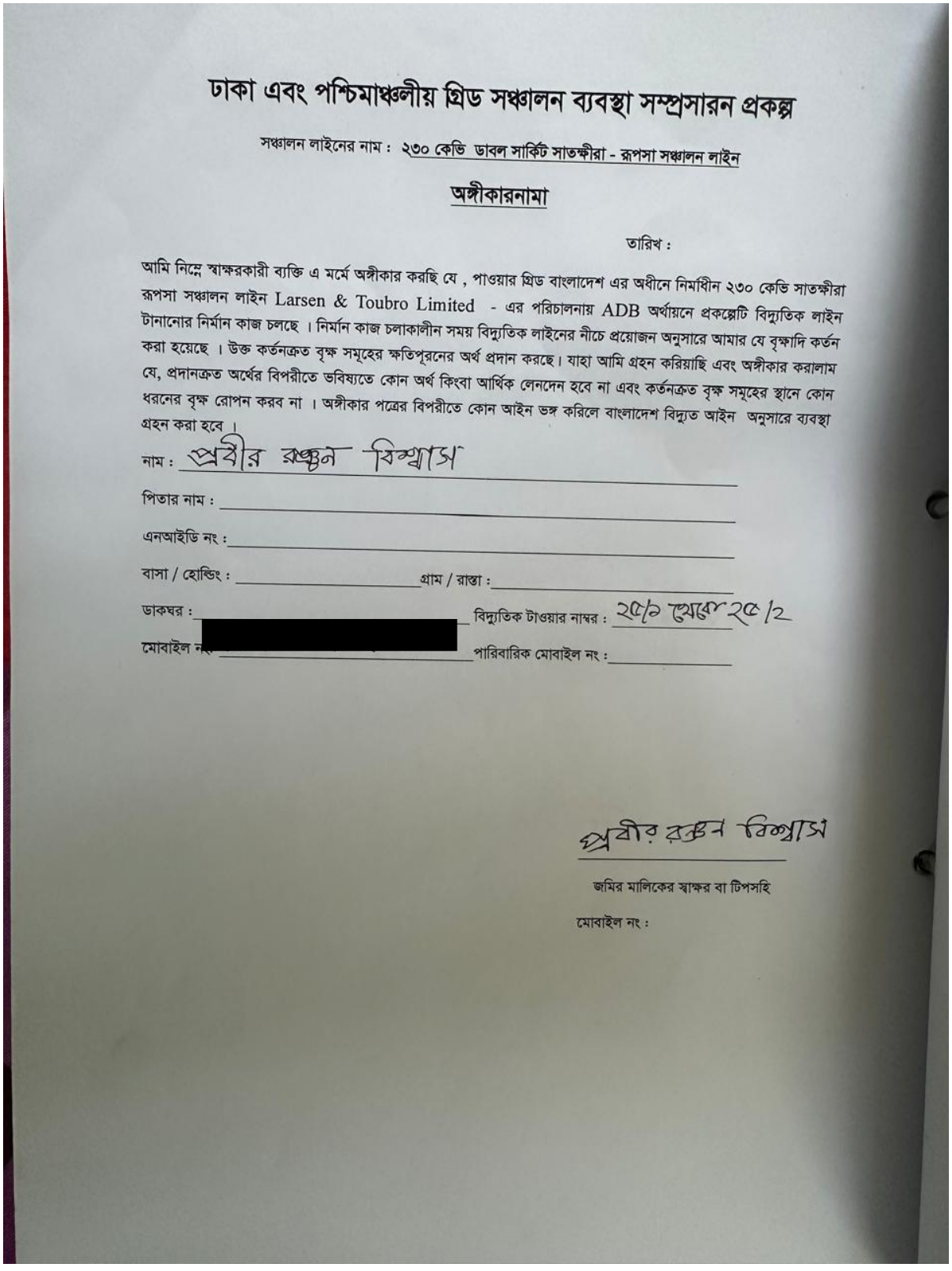
ডাকঘর : _____ বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

মোবাইল ন[redacted] পারিবারিক মোবাইল নং : _____

স্বপন কুমার বিশ্বাস

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :



ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : প্রবীর রঞ্জন বিশ্বাস

পিতার নাম :

এনআইডি নং :

বাসা / হোল্ডিং : গ্রাম / রাস্তা :

ডাকঘর : বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

মোবাইল নং : পারিবারিক মোবাইল নং :

প্রবীর রঞ্জন বিশ্বাস

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :

ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : বিকাশ চন্দ্র বিশ্বাস

পিতার নাম : _____

এনআইডি নং : _____

বাসা / হোল্ডিং : _____ গ্রাম / রাস্তা : _____

ডাকঘর : _____ বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

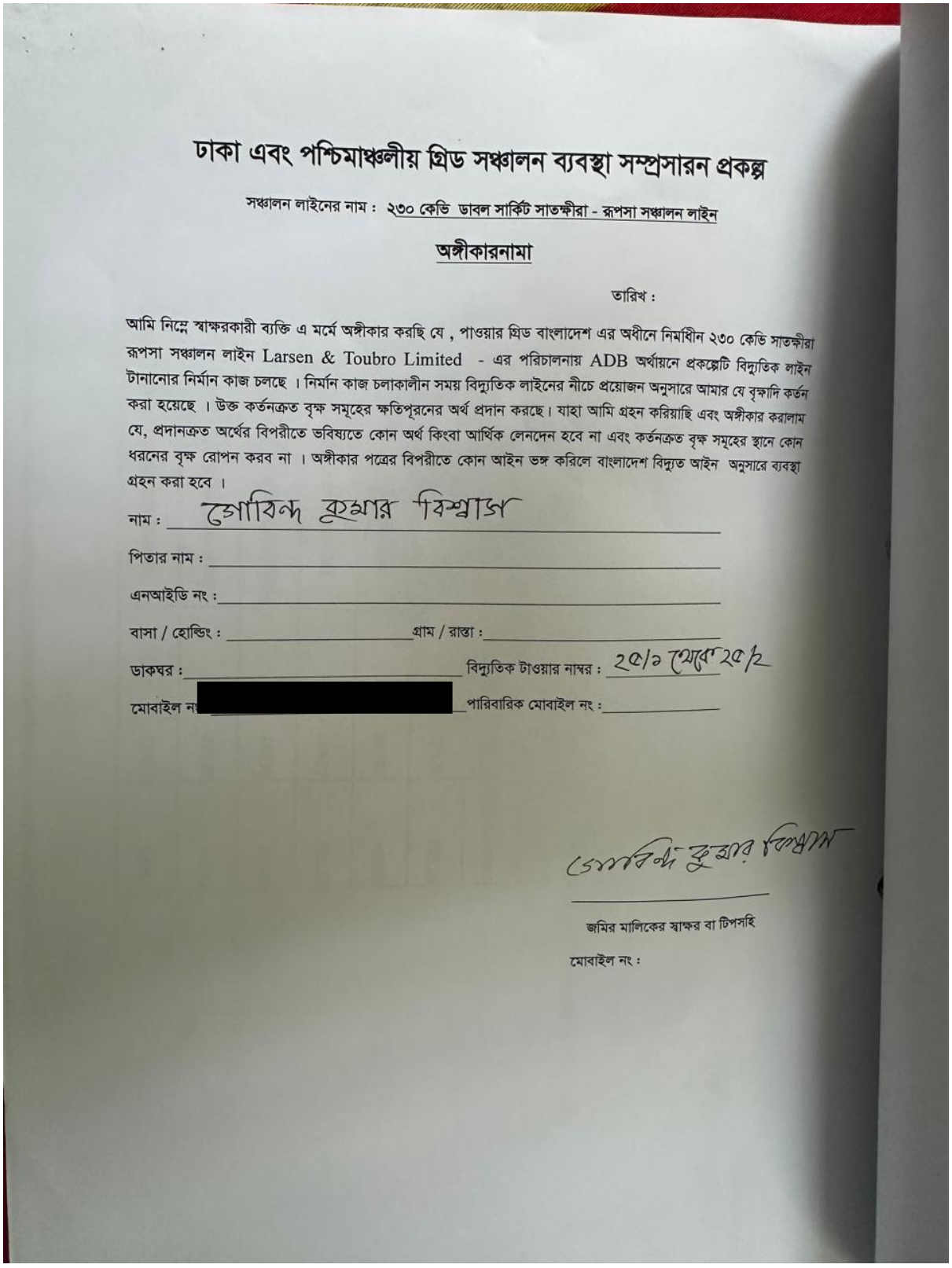
মোবাইল নং [redacted] পারিবারিক মোবাইল নং : _____

বিকাশ চন্দ্র বিশ্বাস

_____

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :



ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারন প্রকল্প

সঞ্চালন লাইনের নাম : ২৩০ কেভি ডাবল সার্কিট সাতক্ষীরা - রূপসা সঞ্চালন লাইন

অঙ্গীকারনামা

তারিখ :

আমি নিম্নে স্বাক্ষরকারী ব্যক্তি এ মর্মে অঙ্গীকার করছি যে , পাওয়ার গ্রিড বাংলাদেশ এর অধীনে নির্মাধীন ২৩০ কেভি সাতক্ষীরা রূপসা সঞ্চালন লাইন Larsen & Toubro Limited - এর পরিচালনায় ADB অর্থায়নে প্রকল্পেটি বিদ্যুতিক লাইন টানানোর নির্মান কাজ চলছে । নির্মান কাজ চলাকালীন সময় বিদ্যুতিক লাইনের নীচে প্রয়োজন অনুসারে আমার যে বৃক্ষাদি কর্তন করা হয়েছে । উক্ত কর্তনক্রত বৃক্ষ সমূহের ক্ষতিপূরনের অর্থ প্রদান করছে। যাহা আমি গ্রহন করিয়াছি এবং অঙ্গীকার করালাম যে, প্রদানক্রত অর্থের বিপরীতে ভবিষ্যতে কোন অর্থ কিংবা আর্থিক লেনদেন হবে না এবং কর্তনক্রত বৃক্ষ সমূহের স্থানে কোন ধরনের বৃক্ষ রোপন করব না । অঙ্গীকার পত্রের বিপরীতে কোন আইন ভঙ্গ করিলে বাংলাদেশ বিদ্যুত আইন অনুসারে ব্যবস্থা গ্রহন করা হবে ।

নাম : গোবিন্দ কুমার বিশ্বাস

পিতার নাম : _____

এনআইডি নং : _____

বাসা / হোল্ডিং : _____ গ্রাম / রাস্তা : _____

ডাকঘর : _____ বিদ্যুতিক টাওয়ার নাম্বর : ২৫/১ থেকে ২৫/২

মোবাইল নং [redacted] পারিবারিক মোবাইল নং : _____

গোবিন্দ কুমার বিশ্বাস

_____

জমির মালিকের স্বাক্ষর বা টিপসহি

মোবাইল নং :

Annexure-9: Waste Collection and Separation

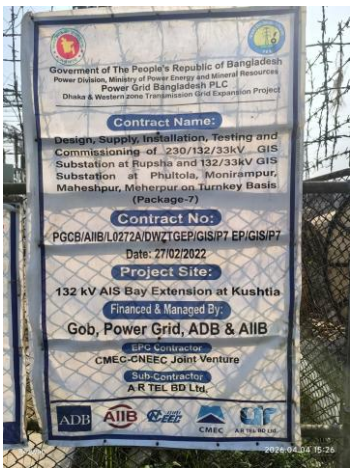
	
TL 4/2 (Bagerhat-Pirojpur Bhandaria)	Package 3 (14/2 TL SMTL)
	
TL 14/2 Kushtia-Meherpur TL	Phultola SS

Annexure-10: Covering of Construction Materials

	
Phultala Substation (Package 7)	Store at Dumuria (Package 3)

	
Package 5	Phultala Substation (Package 7)

Annexure-11: Ensuring OHS and Emergency Contact Information

	
Package 3 (TL8/2 SRTL)	Package 4 (Purbasadipur to Domar TL)
	
Package 5	Package 7- Kushtia

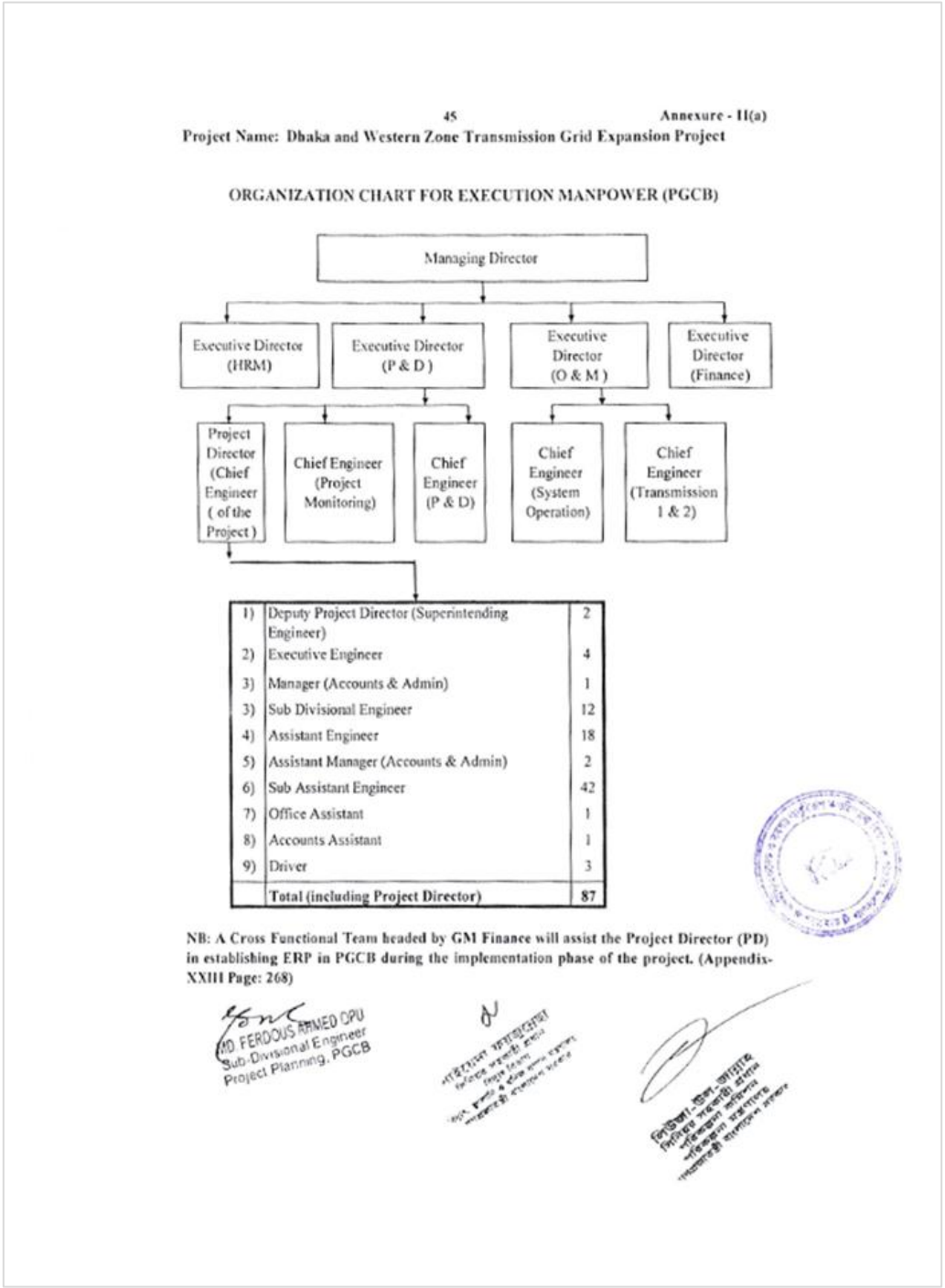
	
Package 4 (Nilphamari Store)	Package 7- Rupsha SS
	
First aid box at construction sites of Package 4 (8/3 Domar Hatibandha TL)	
	
Drinking water facilities at Package 4 (8/3 Domar Hatibandha TL)	Drinking water facilities at Package 3 (11/4 SRTL)

	
Caution tape used to prohibit random site access TL 8/4 (SRTL)	Spraying water at Package 5

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

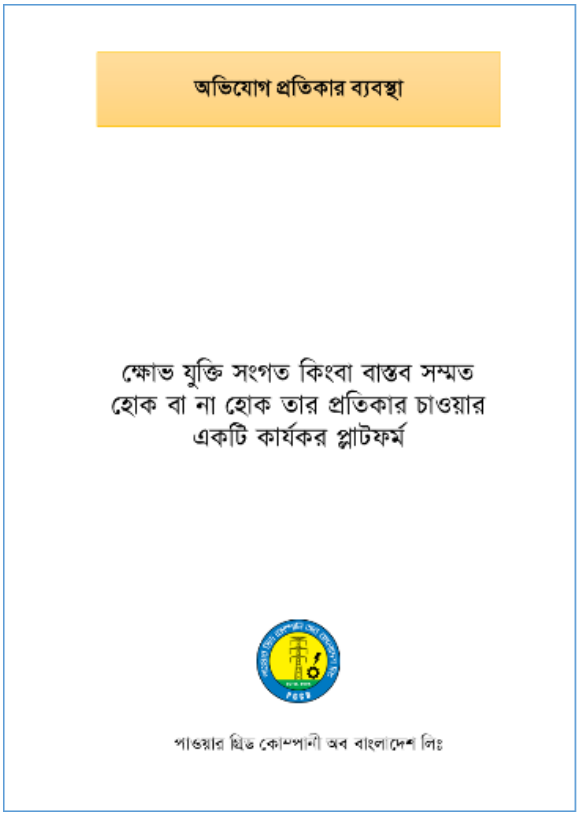
Annexure-14: Link to Baseline Data

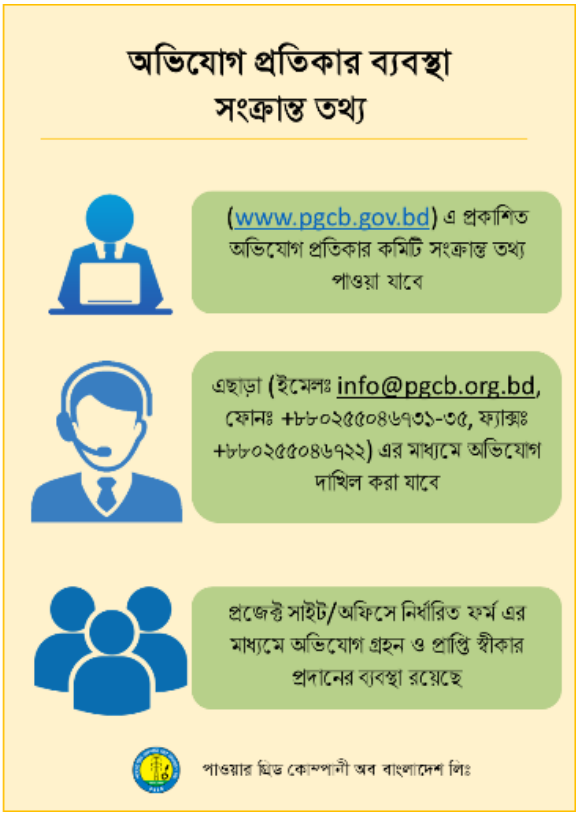
https://drive.google.com/drive/folders/116Pv1_8bc5_ZwPFahPxxvtiOzxm9vo73?usp=sharing

Annexure-15: Link to IEE Addendum

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

Annexure-16: Complaint Logbook and Leaflets





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

Package 4	
	
TL 31/3 (Domar-Hatibandha Route)	TL 4/2 (Bagerhat-Pirojpur Bhandaria)
Package 5	





Package 6





Package 7





Manirampur SS | Phultola SS





Rupsha SS

Training Attendance Sheet

Package 4

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) **Venue: -** ~~[illegible]~~ LOC – 23/1
2) **Date of Training: -** 10.03.26 **Time: From** 10.00 am **To** 10.45 am
3) **Details of Training / Awareness: -** Work at height training.
4) **Training by: -** K.K. Mahanta.
5) **Topic / Subject covered (in Point)**

1) 3 point contact rule on Tower Ascending.
2) 100% tie-off rule.
3) Keeping work area clear & barricaded below.
4) Proper climbing techniques.
5) Buddy system & communication.
6) Weather check (Wind, Rain, Lightning)

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Md. Shamim	LM/DM	Shamim	
02	Md. Jibon	Helper	জীবন	
03	Md. Mithu	Helper	MITHU	
04	Md. Rony	LM/DM	রনি	
05	Md. Shopon	L		
06	Md. Amirul	LM		
07	Md. Kawsar	LM	KAWSAR	
08	Md. Emon	H	ইমন	
09	Md. Sabbir	LM	SABBIR	
10	Md. Payel	L		

HSE Officer / Engineer

Project Manager

CONTROLLED

Page 1

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) **Venue: -**
2) **Date of Training: -** **Time: From_____To _____**
3) **Details of Training / Awareness: -**
4) **Training by: -**
5) **Topic / Subject covered (in Point)**

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Md. Shakamrul	Labour	[illegible]	
02	Md. Shakil	Labour	[illegible]	

HSE Officer / Engineer

Project Manager

CONTROLLED

Pag

TRANSRAIL
Transrail Lighting Limited

Training Participants Report

1) Venue: - 32/4
2) Date of Training: - 05/04/26 Time: From 2:00 To 2:30PM
3) Details of Training / Awareness: - Material Handling training awareness
4) Training by: - Tony Hossain
5) Topic / Subject covered (in Point)

① Explain about manual material handling things.
② Always check before lifting to see is need mechanical help or not.
③ Assess the weight of load
④ Identify the weight of load

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Biplob	Helper	Biplob	
02	Rupok	Helper	রুপক	
03	Sirajul	Lineman	সিরাজুল	
04	Pollab	Helper	পল্লব	
05	Nasim	Lineman	নাসিম	
06	Amit	Lineman	অমিত	
07	Emran	Lineman	ইমরান	
08	Fahim	Helper	FAHIM	
09	Harun	Lineman	হারুন	
10	Raj sk.	Lineman	রিয়াজ	

HSE Officer / Engineer

Project Manager

CONTROLLED

CamScanner

TRANSRAIL Transrail Lighting Limited	**Training Participants Report**	

1) **Venue: -** 31/4
2) **Date of Training: -** 05/09/26 **Time: From_____To _____**
3) **Details of Training / Awareness: -** Manual material handling
4) **Training by: -**
5) **Topic / Subject covered (In Point)**

(V) Before lifting be sure that you can lift.
(VI) Proper PPE need to be use.
(VII) Safe lifting method.
(VIII) Pushing, Pulling carrying
(IX) Workplace Design & Organization

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
11	Johurul	Supervison	[illegible]	
12	Swapno	Lineman	SAPNIL	
13	Sohel Rana	Operaton	[illegible]	
14	Shamsul	Operaton	শামসুল	
15	Bashar	Lineman	বাশার	
16	Joyon	Lineman	জয়ন	
17	Tamim	Lineman	তামিম	
18	Atif	Lineman	মোঃ আতিফ	
19	Nazrul	Lineman	নজরুল	
20	Maruf (II)	Helper	মারুফ	

HSE Officer / Engineer

Project Manager

CONTROLLED

Page | 4

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TRANSRAIL Transrail Lighting Limited	**Training Participants Report**	

1) **Venue: -** 39/9
2) **Date of Training: -** 05/09/26 **Time: From_____To _____**
3) **Details of Training / Awareness: -**
4) **Training by: -**
5) **Topic / Subject covered (In Point)**

//

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
21	Naim	Lineman	নাঈম	
22	Delwar	Lineman	দেলোয়ার	
23	Harun	Lineman	হারুন	
24	Sazzad	Lineman	সাজ্জাদ	
25	Sirajul	Lineman	সিরাজুল	
26	Arif	Lineman	আরিফ	
27	Riaz	Lineman	রিয়াজ	
28	Nurunnobi	Lineman	নুরুন্নবী	
29	Shihab	Lineman	সিহাব	
30	Miraz	Lineman	মিরাজ	

HSE Officer / Engineer

Project Manager

CONTROLLED

Page | 4

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TRANSRAIL Transrail Lighting Limited

Training Participants Report

1) Venue: - 31/4
2) Date of Training: - 05/04/26 Time: From_____To _____
3) Details of Training / Awareness: -
4) Training by: -
5) Topic / Subject covered (in Point)

11

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
31	Hasmat SK	Lineman	হাসমত শেখ	
32	Bayezid	Helpen	বায়েজিদ	
33	Beplab	Helpen	বিপ্লব	
34	Holay	Lineman	মলয়	
35	Md. Jewel	Helpen	মো: জুয়েল রানা	
36	Kollol	Lineman	কল্লোল	
37	Kabbi	Helpen	কাবি	
38	Aslam	Helpen	আসলাম	
39	Emon	Lineman	ইমাব	
40	Parvez	Helpen	parves	

HSE Officer / Engineer

Project Manager

CONTROLLED

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TRANSRAIL Transrail Lighting Limited

Training Participants Report

1) Venue: - T/O
2) Date of Training: - 27.06.26 Time: From 3:00PM To 3:40PM
3) Details of Training / Awareness: - Site Housekeeping - awareness
4) Training by: - Jony
5) Topic / Subject covered (in Point)

(i) Explain about slip, trips & falls prevention
(ii) Falling object like unsecured tools / tower member etc.
(iii) Steel member segregation
(iv) Safe stacking of materials
(v) Scarp materials collection & proper storage
(vi) Fuel & fluid spills & oil prevention from wind etc.

Sr. No.	Name of the Participant (Staff/Worker)	Designation	Signature/Thumb	Remark
01	Md. Rabbi	Helper		
02	Abu Hossen	G/L		
03	Serajul	Fitter		
04	Rakib	Fitter		
05	Khairul	Drawing Master		
06	Rokibul	Helper		
07	Shahidul	Fitter		
08	Nayon	Fitter		
09	Meherab	Helper		
10	Sojib	Helper		

HSE Officer / Engineer

Project Manager

CONTROLLED

Page | 4

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Package 5

Project name: Dhaka Western Zone transmission grid Expansion project (package-05)

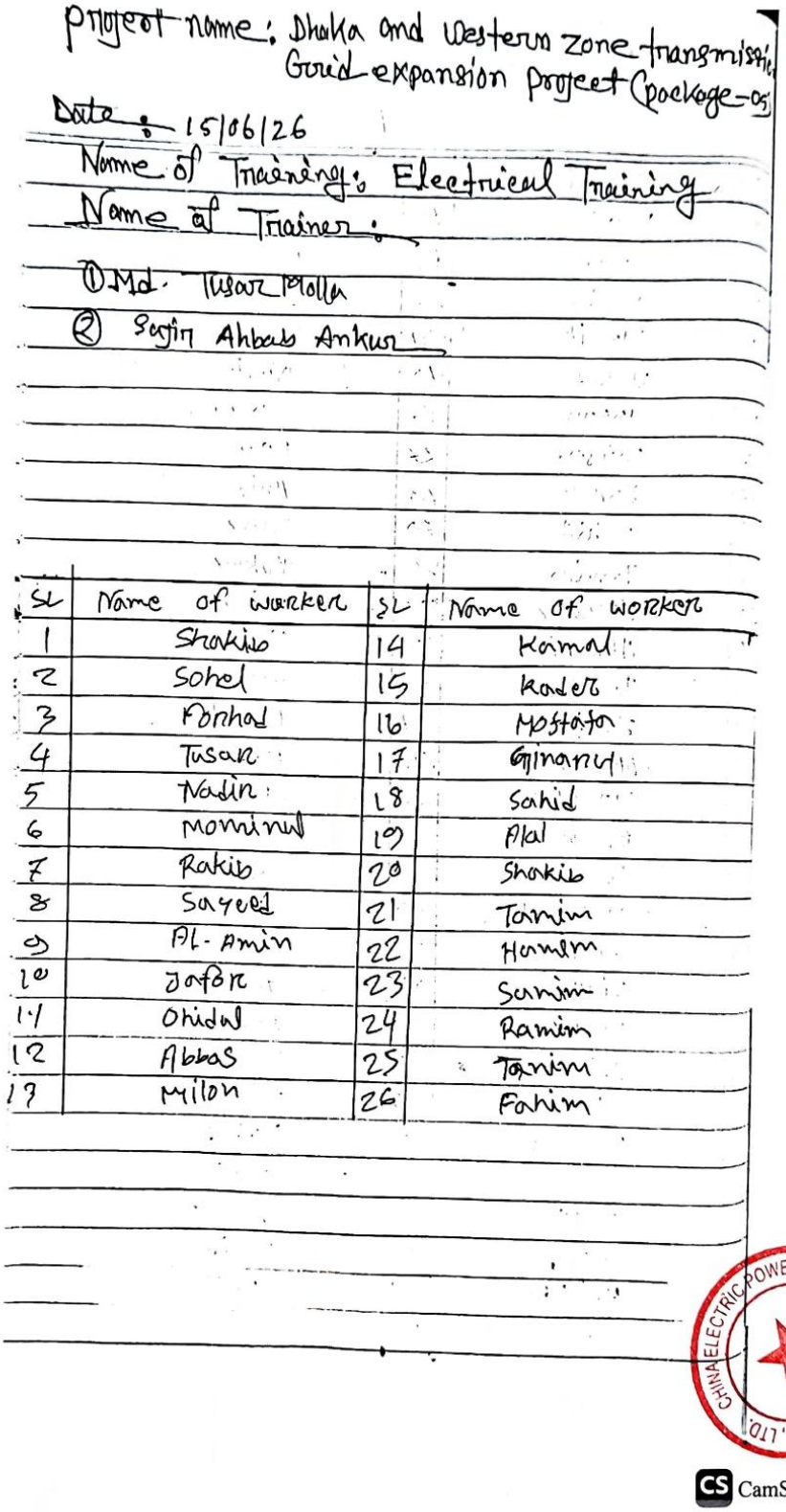
Date: 05/01/2026

Training name: Work at height Training

Trainer name:
Md. Tusar Molla
md. Sazin Ahbab Ankur.

SL	Name of worker	SL	Name of worker
01	Shakib	21	Hamim
02	Tamim	22	Rakib
03	Kamal	23	Sahin
04	Nayeem	24	Tanim
05	Mostafa	25	Borhan
06	Jahid	26	Ripon
07	Manik	27	Emon
08	Kader	28	Surhad
09	Alal	29	Imran
10	Ohidul	30	Hasan
11	Harim	31	Motin
12	Rakib	32	Manik
13	Baijid	33	Jahid
14	Nayan	34	Hossain
15	Parves	35	Sohid
16	Sahin	36	Kamal
17	Faruk	37	Mostafa
18	Sakil	38	Giracul
19	Motin	39	Alal
20	Sohel	40	Al-Amin

ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO.
CamScanner



Project name: Dhaka and Western Zone transmission Grid expansion project (package-05)

Date: 15/06/26

Name of Training: Electrical Training

Name of Trainer:

① Md. Tusar Molla

② Sajin Ahbab Ankur

SL	Name of worker	SL	Name of worker
1	Shakib	14	Kamal
2	Sohel	15	Kader
3	Forhad	16	Mostafa
4	Tusar	17	Ginanta
5	Nadir	18	Sahid
6	Mominul	19	Akal
7	Rakib	20	Shakib
8	Sayeed	21	Tamim
9	Al-Amin	22	Hamim
10	Jafor	23	Samim
11	Ohidul	24	Ramim
12	Abbas	25	Tanim
13	Milon	26	Fahim

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Package 6

project name: Dhaka and western zone transmission grid expansion project (package-06)

Training name: E.H.S. Induction Training.

Date: 6/3/26 Time: 8:30 AM.

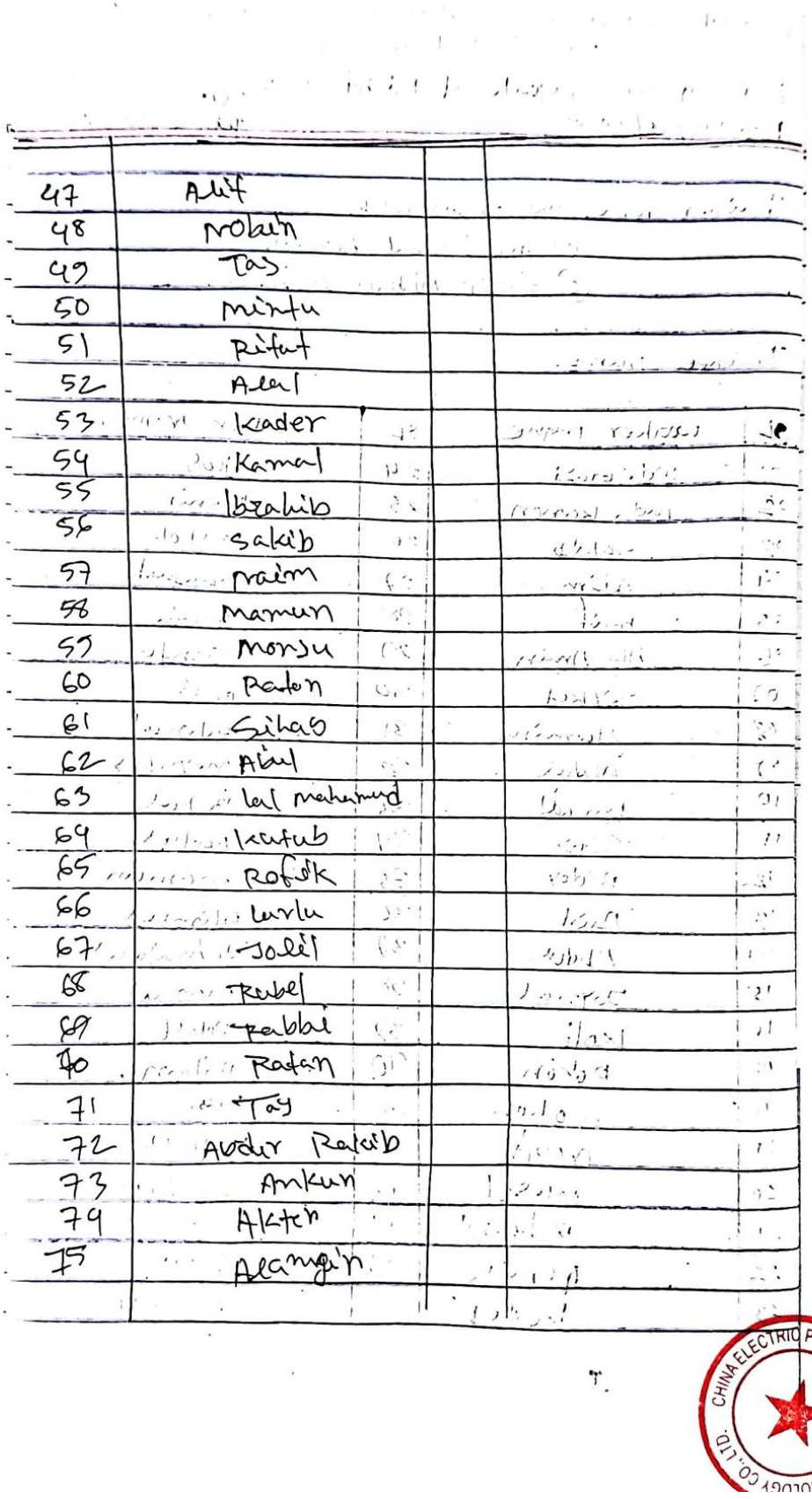
Trainer name: md. Tuser molla.
② md. Forhad Hossen.
③ sajib Ahbab Ankur.

Trainee name:

SL	worker name	SL	worker name.
01	md. Giasi	24	Sukas
02	md. kanon	25	Monir
03	Sakib	26	Ashok
04	Alim	27	Sanaut
05	Asif	28	Sohid
06	AL- Amin	29	Santo
07	Soykot	30	Rafi
08	Hamim	31	Rahmat
09	Abdul	32	Meyhes
10	Ismail	33	Babul
11	Sabus	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	Habib
19	Nobir	42	Nobir
20	Rasel	43	Alauddin
21	Robbani	44	Rasel
22	Almin	45	Kutub
23	Kutub	46	AL-Amin

II





47	Alif		
48	Nokib		
49	Tas		
50	Mintu		
51	Rifat		
52	Alal		
53	Kader		
54	Kamal		
55	Ibrahib		
56	Sakib		
57	Raim		
58	Mamun		
59	Monju		
60	Rafon		
61	Sihas		
62	Abul		
63	Lal Mahamud		
64	Kafub		
65	Rofok		
66	Lurlu		
67	Jalil		
68	Rabel		
69	Rabbi		
70	Rafan		
71	Tay		
72	Abdur Rakib		
73	Amkun		
74	Akter		
75	Alamgir		

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	ME & CCS

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

DOCUMENT NAME
EHS induction-June 2026

CamScanner

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

MAZUMDER ENTERPRISE

中国国信服务

EHS Induction

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

Date: 05-June-2026

Environmental, Health, and Safety induction is a process of introducing new employees to a company's policies, procedures, and potential hazards related to environmental impact, health, and safety in the workplace.

Focus on Safety: Workplace safety policies and procedures: All worker Safety policies and procedures must be followed in the workplace. The worker will perform his duties according to his designation.

Identification of hazards: Avoid hazards areas, and inform the site supervisor about hazards areas as much as possible. If hazards areas are identified, they will be repaired in a timely manner. You must know before using any chemical, Electrical, Machinery equipment or tools.

***Emergency procedures:** In case of any accident, the emergency site office must be informed. For any other emergency, the number given on the site must be contacted. In case of electrical shock or fire, emergency control measures must be taken. For this, fire extinguishers are available on site and must be used.

* **Use of personal protective equipment (PPE):** Every worker must use PPE to ensure their own safety.

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

* **Employee health and safety:** There is sufficient protective equipment on site to protect the health of workers. There is first aid equipment, which every worker can take it.

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

EHS Induction

Worker Attendance: Rupsh Substation.

Project Name:

Date: 05.06.26 June -26

Sl no:	Worker Name	Designation	Signature
০১.-	আকাশ	মিস্ত্রি	আকাশ
০২.	বাবু	মিস্ত্রি	বাবু
০৩.	সামুন	হেলপার	সামুন
০৪.	রাব্বি	হেলপার	রাব্বি
০৫.	সালেহা	হেলপার	সালেহা
০৫.	মুরুন	হেলপার	মুরুন
০৭.	তৌশিক	হেলপার	তৌশিক
০৮.	লালোন	হেলপার	লালোন
০৯.	লিমন	মিস্ত্রি	লিমন
১০.	তাহমিদ	হেলপার	তাহমিদ
১১.	আরিফ	হেলপার	আরিফ
১২.	অভিজিত	হেলপার	অভিজিত

05.06.26

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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	ME & CCS

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

DOCUMENT NAME
Fire Fighting training Sheet-February 2026

CamScanner

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

MAZUMDER ENTERPRISE

中国现信服务 CHINA CONSERVICE

Firefighting training

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

Date: 10-February-2026

Learning ab out tire 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 tire. 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 GIS Rupsha
Date: 10.02.2026

Sl no:	Worker Name	Designation	Signature
01.	Sukan	Helper	
02.	Purnob	Helper	
03.	Rabbi	Masson	
04.	Parvaze	Masson	
05.	Goutam	Masson	
06.	Omar faruk	Masson	
07.	Purnob	Helper	
08.	Shakil	Helper	
09.	Hanif	Masson	
10.	Hossain	Helper	
11.	Hasan	Helper	
12.	ashik	Helper	
13.	Malek	Masson	
14.	Zolil	Masson	
15.	Prince	Helper	
16.	Maman	Masson	
17.	Hashibul	Helper	
18.	Lalon	Helper	
19.			
20.			
21.			
22.			
23.			

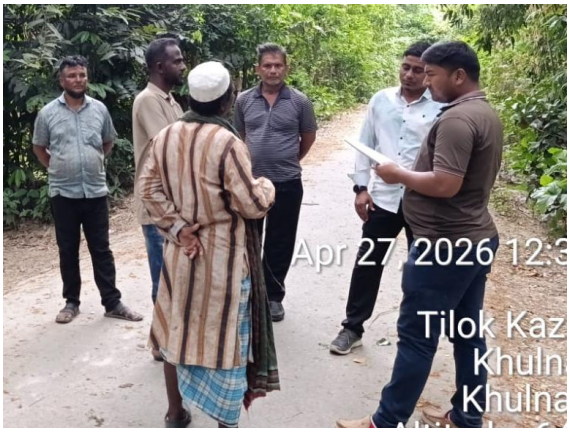
10.02.2026

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Annexure-18: Community Engagement



24/2 Domar Purbasadipur TL



AP 14, Domar-Hatibandha TL



Near Rupsha Sub Station



14/5, SRTL Route



Near Phultola Substation

Focus Group Discussion (FGDs)

Participants List

Sl. No.	Participants Name	Location
1	Bablu Ray	**Domar**
2	Hironmay Adhikary	
3	Abdullah Sarwar	

4	Md. Afizar Rahman	
5	Md.Badiuzzaman	
6	Sree kashob Chandro Barmon	
7	Maruf Akter Smrity	
8	Md.Abdullah Al Mamun	
9	Md.Anarul Islam	
10	Md. Maruful Haque Jorder	**Satkhira and Khulna**
11	Md. Borhan Uddin Fakir	
12	Md. Nasimuddin Akunzee	
13	SK Moshiur Rahman	
14	Md. Soud Sheikh	
15	Md. Abdul Hai Shaikh	
16	Md. Azizur Rahman	
17	Md. Aslam Sheikh	
18	Md Oliar Mollah	
19	Md Asadur Rahman	
20	Akter Molongi	
21	Md Kalam Gazi	
22	Md. Fazlul Karim	**Nilphamary**
23	Md. Abdul Gofur Shakh	
24	Md. Azahar Ali	
25	Md. Khayrul Islam	
26	Md. Abul Kashem	
27	Md. Joblur Rakib	
28	Labu Islam	

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/1gd64IIY603Y3jj0QRSsXLAtNYtoxyNyP?usp=sharing

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

47. Environmental Management Plan

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

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

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



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 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 Jan-Jun 2026

Note: Please, attach waste inventory for each month from Jan-Jun 2026 with sign and seal. Also please add the plastic empty bags and Piling mud amount in this inventory (Compulsory)

Project Name: New 400/230kV GIS Substation ar Kaliganj (Package-5)							Document No: -	
Month: June 2025	Package: 5						Date: - 30.06.2026	
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	8			8	TP	
ii.	PP rope	Kg	8			8	TP	
iii.	Safety Helmet	Nos	12			12	TP	
iv.	Safety Shoes	Pair	5			5	TP	
v.	Cartoon Box	Kg	15			15	TP	
vi.	Safety Harness	Nos	4			4	TP	
B	Materials Waste							
i.	Conductor Bits	Kg	5			5	TP	
ii.	Steel	Ton	0.10			0.10	TP	
iii.	Other Metals.....	Kg	30			30	TP	
C	Wood Waste	Kg	120			120		
D	Food Waste	Kg	1200			1200	TP	
E	Paper Waste	Kg	10			10	TP	
F	Packing Materials	Kg	5			5	TP	
G	Other Non-Hazardous materials	Kg	0			0		
2. Hazardous Waste								
A	Paints	Ltr	0			0		
B	Lubricants oil	Ltr	0			0		
C	Plastic waste	Kg	30			30	TP	
D	Cement bags	Nos	2550			2250	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	3000			3000	TP	
C	Wastewater	Ltr	55000			4500	TP	

CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD
Du 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

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 Jan-Jun 2026

Note: Please, attach waste inventory for each month from Jan-Jun 2026 with sign and seal. Also please add the plastic empty bags and Piling mud

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

Month: June 2025 Package: 6 Date: - 29.06.2026

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	12			12	TP	
ii.	PP rope	Kg	7			7	TP	
iii.	Safety Helmet	Nos	10			10	TP	
iv.	Safety Shoes	Pair	8			8	TP	
v.	Cartoon Box	Kg	13			13	TP	
vi.	Safety Harness	Nos	6			6	TP	
B	Materials Waste							
i.	Conductor Bits	Kg	8			8	TP	
ii	Steel	Ton	0.15			0.15	TP	
iii	Other Metals.....	Kg	15			15	TP	
C	Wood Waste	Kg	130			130		
D	Food Waste	Kg	1500			1500	TP	
E	Paper Waste	Kg	12			12	TP	
F	Packing Materials	Kg	7			7	TP	
G	Other Non-Hazardous materials	Kg	0			0		
2. Hazardous Waste								
A	Paints	Ltr	0			0		
B	Lubricants oil	Ltr	0			0		
C	Plastic waste	Kg	30			30	TP	
D	Cement bags	Nos	2178			2178	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	32000			32000	TP	
C	Wastewater	Ltr	58000			58000	TP	

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Tel: 86-10-63412099 Fax: 86-10-63412040
www.cet.sgcc.com.cn

Package 7

Project Name: Rupsha						Document No: -				
Month: June 2026			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

	
Store in Dumuria- Package 3	TL 10/4 SRTL- Package 3
	
TL 31/3 (Domar-Hatibandha Route)	Nilphamari store under Package 4
Package 4	
	
Package 5 and 6	

	
Phultala SS	Phultola SS
	
Rupsha SS	
	
Manirampur SS	
Package 7	

Annexure-23: Status of CAP

Grievence Box at Sites

	
Package 6	Nilphamari Store (Package 4)

Secondary Container at construction site

	
AP 16/1 and 16/2 Domar-Hatibandha TL Package 4	

Worker with PPE

	
SS under Package 5	SS under Package 6

	
Phultola SS under Package 7	31/3 Domar-Hatibandha Package 4
	
14/4 TL SMTL Package 3	Package 6

Annexure-24: Pre-Work Briefing

	
12/2 Kushtia-Meherpur (Pakage 3)	6/2 Gopalganj- Shibchar (Package 4)

	
Package 5	Phultola SS under Package 7

Annexure-25: Clearance from BIWTA for River Crossing

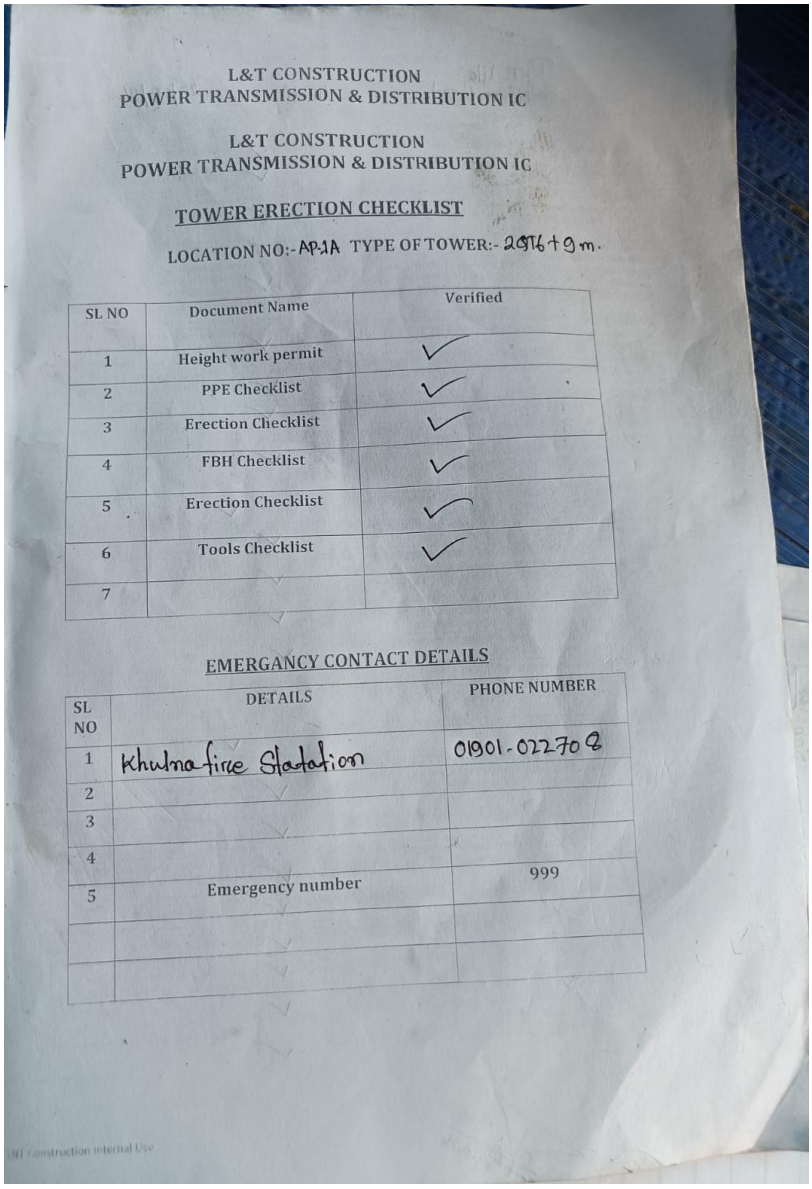
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Annexure-26: Crops Rate from Agricultural Office

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

Annexure-27: Health and safety Checklist

Safety Checklist for Erection and Stringing Work at Package 3



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

TOWER ERECTION CHECKLIST

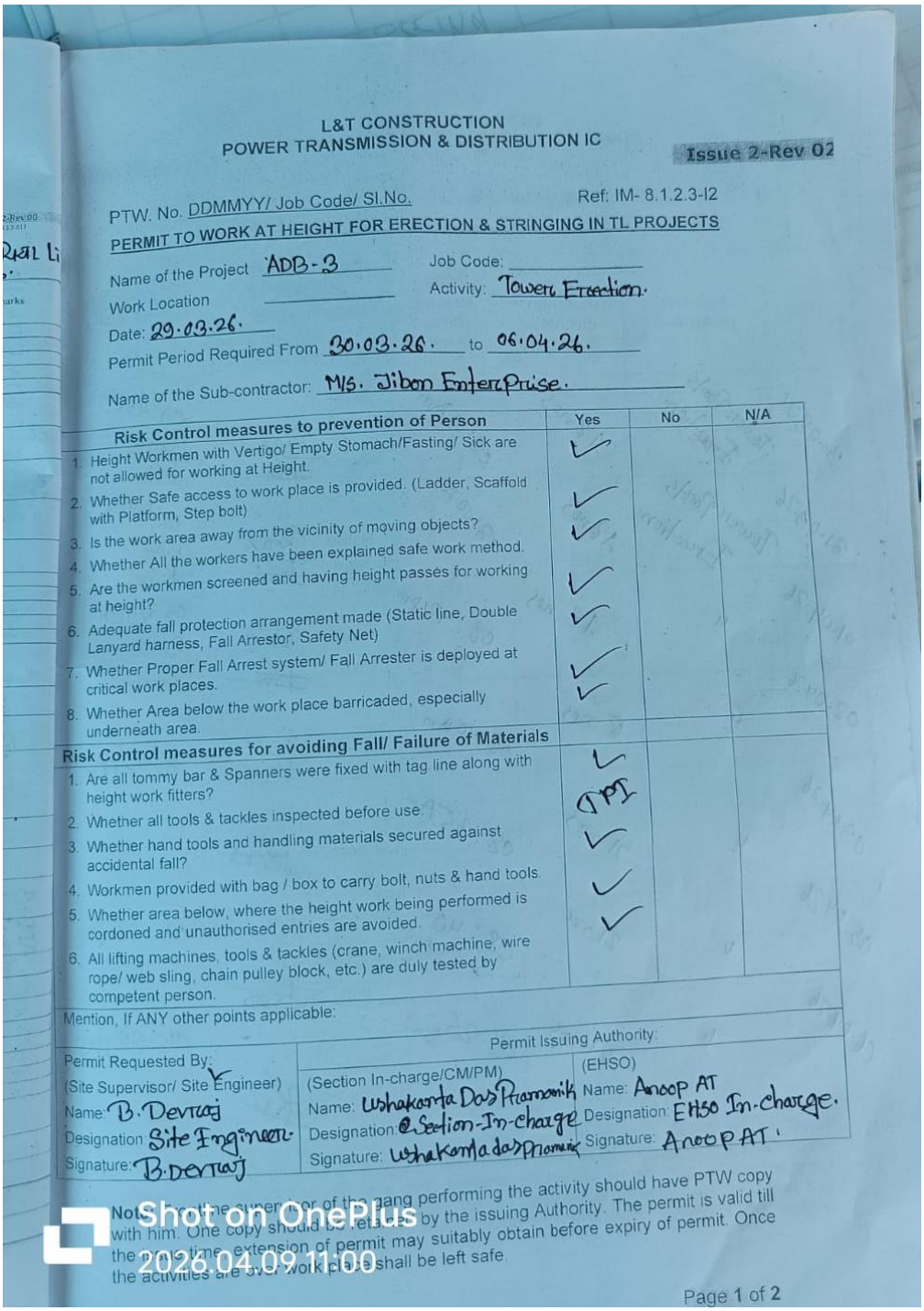
LOCATION NO:- AP-1A TYPE OF TOWER:- 2976+9m.

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

EMERGANCY CONTACT DETAILS

SL NO	DETAILS	PHONE NUMBER
1	Khulna fire Station	01901-022708
2		
3		
4		
5	Emergency number	999

L&T Construction Internal Use



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 02

PTW. No. DDMMYY/ Job Code/ Sl.No. Ref: IM- 8.1.2.3-I2

PERMIT TO WORK AT HEIGHT FOR ERECTION & STRINGING IN TL PROJECTS

Name of the Project: ADB-3 Job Code: _____

Work Location: _____ Activity: Tower Erection.

Date: 29.03.26.

Permit Period Required From 30.03.26. to 06.04.26.

Name of the Sub-contractor: M/s. Jibon Enterprise.

Risk Control measures to prevention of Person	Yes	No	N/A
1. Height Workmen with Vertigo/ Empty Stomach/Fasting/ Sick are not allowed for working at Height.	✓		
2. Whether Safe access to work place is provided. (Ladder, Scaffold with Platform, Step bolt)	✓		
3. Is the work area away from the vicinity of moving objects?	✓		
4. Whether All the workers have been explained safe work method.	✓		
5. Are the workmen screened and having height passes for working at height?	✓		
6. Adequate fall protection arrangement made (Static line, Double Lanyard harness, Fall Arrestor, Safety Net)	✓		
7. Whether Proper Fall Arrest system/ Fall Arrester is deployed at critical work places.	✓		
8. Whether Area below the work place barricaded, especially underneath area.	✓		
Risk Control measures for avoiding Fall/ Failure of Materials			
1. Are all tommy bar & Spanners were fixed with tag line along with height work fitters?	✓		
2. Whether all tools & tackles inspected before use.	TPI		
3. Whether hand tools and handling materials secured against accidental fall?	✓		
4. Workmen provided with bag / box to carry bolt, nuts & hand tools.	✓		
5. Whether area below, where the height work being performed is cordoned and unauthorised entries are avoided.	✓		
6. All lifting machines, tools & tackles (crane, winch machine, wire rope/ web sling, chain pulley block, etc.) are duly tested by competent person.	✓		

Mention, If ANY other points applicable:

Permit Requested By:	Permit Issuing Authority:	
(Site Supervisor/ Site Engineer)	(Section In-charge/CM/PM)	(EHSO)
Name: B. Devraj	Name: Ushakamta Das Pramanik	Name: Anoop AT
Designation: Site Engineer	Designation: Section-In-charge	Designation: EHSO In-charge.
Signature: B. Devraj	Signature: Ushakamta das Pramanik	Signature: Anoop AT.

Note: The supervisor of the gang performing the activity should have PTW copy with him. One copy should be returned by the issuing Authority. The permit is valid till the end time extension of permit may suitably obtain before expiry of permit. Once the activities are over work place shall be left safe.

Page 1 of 2

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2026.04.09 11:00

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

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

Date of Inspection: 01/01/26

Name of the Project.....GOPAL GANJ-SHIVCHOR

230KV.....

Loc. No. 1210..... Classification and Type of tower .....2DAX+0M.....

Contractor .....Mollah Trading.....

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 --15/15 Safety Belt-No in use/ total workers -06/15 Safety Shoe-No. in use/total workers -15/15 Hand Gloves-No. in use/total worker --15/15	
	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 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) = 07 PP Rope = 08 D Shackles and hooks = 28 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	

Page | 1

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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. Shanto..... b. Al-Amin.....c. Monsur.....	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: 01/01/26

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

Date of Inspection: 29/06/26

Name of the Project: ADB package-04

Loc. No. 310 Classification and Type of tower 1DT6 + 4.5 mtr

Contractor: Shahajalal Erectors

Sr. No.	Description	Observation	Remark
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA	
2	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 -- 14/14 Safety Belt-No in use/ total workers -- 00/14 Safety Shoe-No. in use/total workers -- 14/14 Hand Gloves-No. in use/total worker -- 14/14	
	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 = Gin pole = 0 Pulleys (Open & Closed) = 07 Ropes/Slings (Wire Rope) = 05 PP Rope = 06 D Shackles and hooks = 57 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 (Gin 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: Sohel	
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. Monir b. Kamrul c. Enamul	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. **HSE Officer/Engg.** **Project Manager**

Date: 29/06/26

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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Annexure-28: Environmental Management Implementation Schedule (July- December 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 1, 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 1, 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 of Package 1, 3 and 4 and substation construction sites of Package 5,6 and 7
Noise Pollution	Ambient noise level	DoE standards	Monitoring report analysis	Regularly during construction	At representative tower of Package 1, 3 and 4 and substation construction sites of Package 5,6 and 7
Pollution due to Wastes	Checking storage, transportation, handling, and disposal of wastes.	DoE guidelines	Inspection	Regular	Construction sites and camps of Package 1,3,4,5,6, and 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 of Package 1, 3 and 4
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 of Package 1, 3 and 4
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 of Package 1, 3 and 4
Occupational health	Use of PPE, general health, water	DoE/IFC	Inspection	Regular	At construction sites and

Environmental Issues/Parameters	Monitoring Parameters	Standards/ Guidelines	Means of Monitoring	Frequency	Location
and safety	supply and sanitation.	guidelines			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 4

PPE Inventory

Package: 04 **Date: -30.06.2026**

SL+A3:D65	PPE Item	Unit	RECEIVED QTY	Available QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	5.0	5.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	6.0	3.0
3	Ear bud	Numbers	500.0	120.0
4	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	50.0	18.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	50.0	10.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	60.0	20.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	30.0	10.0
8	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	60.0	10.0
9	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	100.0	60.0
10	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	10.0	2.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	100.0	40.0
12	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	100.0	30.0
13	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	150.0	50.0
14	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	250.0	80.0
15	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	30.0	10.0

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Transrail lighting ltd.

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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	100.0	60.0
17	SHOULDER PAD; MATERIAL :- Leather;	Numbers	300.0	80.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	500.0	180.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	100.0	40.0
20	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	50.0	12.0
21	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	180.0
22	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	155.0	55.0
23	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load carrying;COLOUR:-Yellow;With chin strap	Numbers	150.0	50.0
24	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	150.0	50.0
25	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	5000.0	1000.0
26	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	2000.0	500.0
27	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	5000.0	1000.0
28	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	15.0	5.0
29	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	25.0	10.0
30	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	30.0	30.0

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31	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	30.0	30.0
32	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	50.0	10.0
33	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	10.0	10.0
34	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	500.0	100.0
35	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	60.0	60.0
36	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	100.0	100.0
37	TOOL LIFTING BAG; 25 kg;	Numbers	500.0	150.0
38	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	10.0	10.0

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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 Kaligonj on turnkey basis (Package-5)

Date:30 June, 2026

SL	PPE Item	Unit	Received Qty	Available Qty
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	4.0	3.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	1.0	1.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	2.0	2.0
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	19.0	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	14.0	13.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	17.0	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	16.0	13.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	22.0	20.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	13.0	10.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	18.0	16.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	32.0	30.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	23.0	21.0
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	12.0	10.0

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SL	PPE Item	Unit	Received Qty	Available Qty
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	5.0	4.0
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	12.0
16	SHOULDER PAD; MATERIAL :- Leather;	Numbers	18.0	16.0
17	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	15.0	13.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	13.0	12.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	62.0	57.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	13.0	13.0
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	4.0	4.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	9.0	8.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	13.0	12.0

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SL	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	8.0	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	113.0
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	9.0	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	6.0	6.0
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	6.0	6.0
31	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load carrying;COLOUR:-Yellow;With chin strap	Numbers	3.0	3.0
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	42.0	40.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	95.0	88.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	28.0	26.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	7.0	7.0

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SL	PPE Item	Unit	Received Qty	Available Qty
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	13.0	12.0
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	18.0	17.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	20.0	18.0
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	15.0	13.0
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	12.0
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	7.0	7.0
45	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	9.0	9.0
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	0.0	0.0
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	16.0	13.0
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	11.0	11.0
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	6.0	6.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	2.0	2.0

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SL	PPE Item	Unit	Received Qty	Available Qty
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	6.0	6.0
54	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	27.0	27.0
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	13.0	13.0
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	4.0	4.0
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	14.0	14.0
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	4.0	4.0
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	14.0	13.0
60	TESTER; TYPE :- Pen Type;	Numbers	3.0	3.0
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	4.0	4.0
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	20.0	20.0
64	TOOL LIFTING BAG; 25 kg;	Numbers	5.0	5.0
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	3.0	3.0
66	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	15.0	15.0

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SL	PPE Item	Unit	Received Qty	Available Qty
67	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	18.0	17.0
68	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	4.0	4.0
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: 29 June, 2026

SL	PPE Item	Unit	Received Qty	Available Qty
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	6.0	5.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	0.0	0.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	5.0	4.0
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	25.0	22.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	18.0	18.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	17.0	17.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	120.0	115.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	20.0	18.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	19.0	16.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	20.0	17.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	40.0	38.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	25.0	22.0
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	18.0	17.0

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SL	PPE Item	Unit	Received Qty	Available Qty
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	12.0	10.0
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	13.0
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	20.0	19.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	20.0	17.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	80.0	77.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	15.0	13.0
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	8.0	8.0
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	5.0	5.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	10.0	10.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	10.0	10.0

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SL	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	6.0	6.0
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	110.0	103.0
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	15.0	13.0
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	15.0	12.0
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	2.0	2.0
31	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load carrying;COLOUR:-Yellow;With chin strap	Numbers	15.0	14.0
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	52.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	105.0	98.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	30.0	28.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	7.0	7.0

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SL	PPE Item	Unit	Received Qty	Available Qty
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0	8.0
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	25.0	23.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	18.0	17.0
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	20.0	18.0
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	9.0
42	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	15.0	14.0
43	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	10.0	10.0
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	10.0	10.0
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	17.0	14.0
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	10.0	8.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	2.0	2.0

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SL	PPE Item	Unit	Received Qty	Available Qty
51	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	2.0	2.0
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	35.0	33.0
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	25.0	27.0
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	5.0	5.0
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	25.0	23.0
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 15 m;	Numbers	6.0	6.0
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	15.0	13.0
60	TESTER; TYPE :- Pen Type;	Numbers	7.0	7.0
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm2; WIRE LENGTH :- 13 m;	Numbers	5.0	5.0
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	30.0	27.0
64	TOOL LIFTING BAG; 25 kg;	Numbers	5.0	5.0
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	3.0	3.0
66	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	15.0	13.0

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SL	PPE Item	Unit	Received Qty	Available Qty
67	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	30.0	28.0
68	MEDICAL EQUIPMENT AS DESCIBED FURTHER; Ambu Bag	Numbers	5.0	5.0
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 7

PPE Inventory

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

Package: 7 Date: - 30/06/2026

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

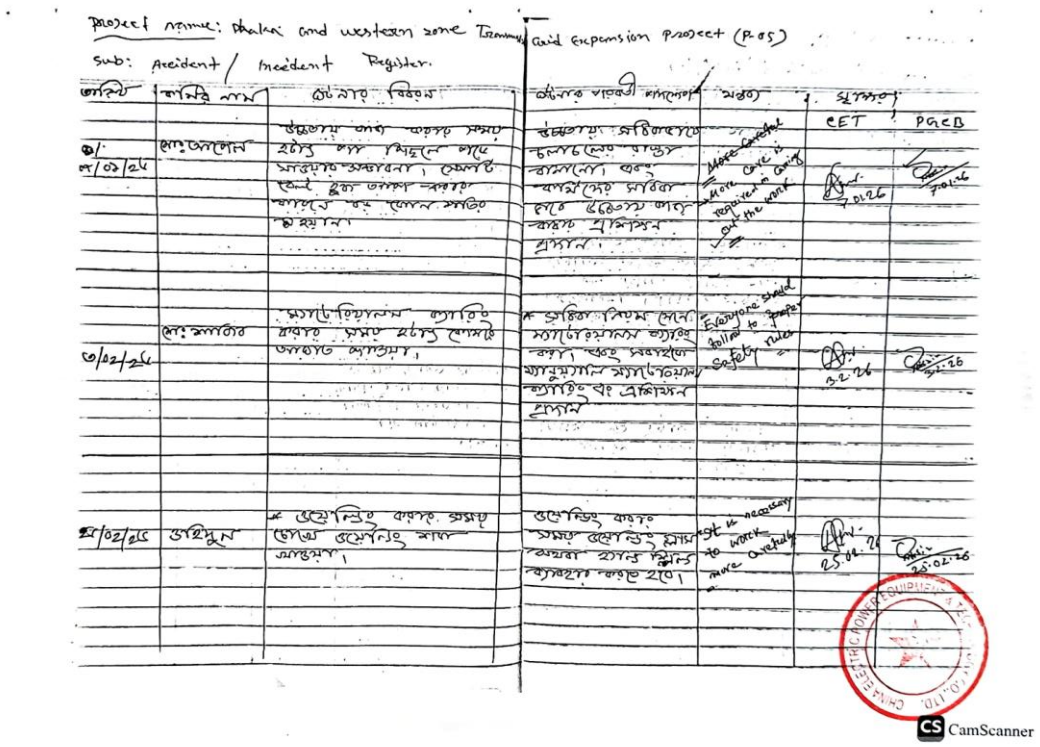
16	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 6; Electrical grade;	Pairs	0.0	0.0
17	SHOULDER PAD; MATERIAL :- Leather;	Numbers	0.0	0.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- 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
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

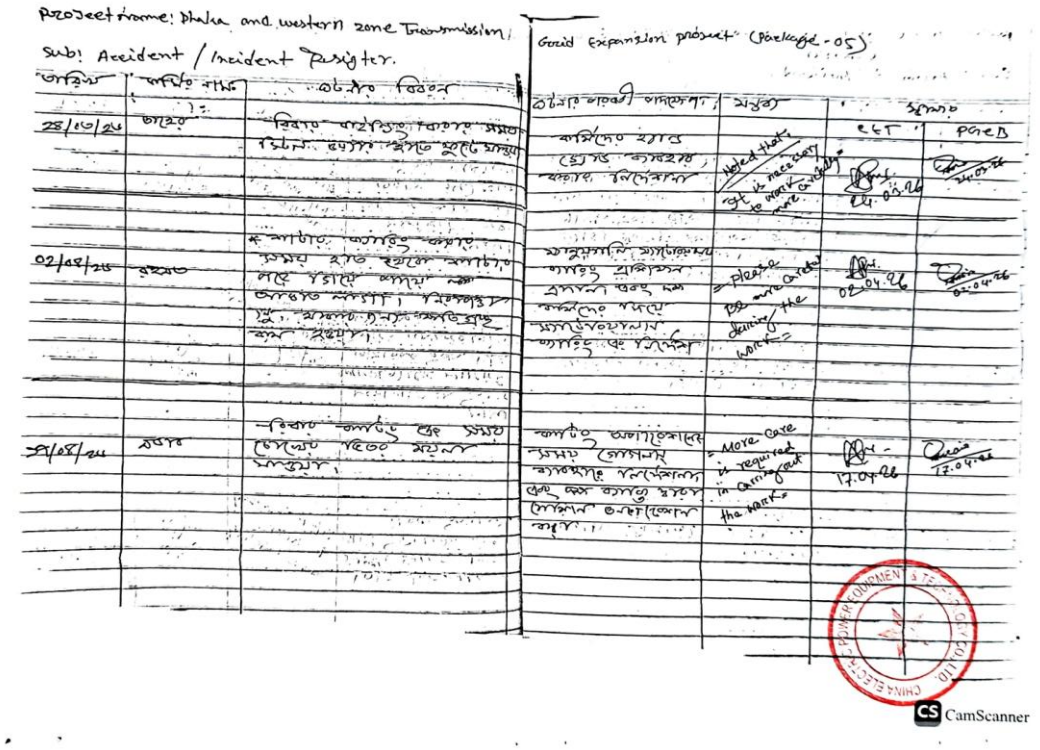
30	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- PU; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected single density polyurethane sole; SIZE :- 6;	Pairs	0.0	0.0
31	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	0.0	0.0
32	SAFETY HELMET;MATERIAL:-PVC;TYPE:-Load 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
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

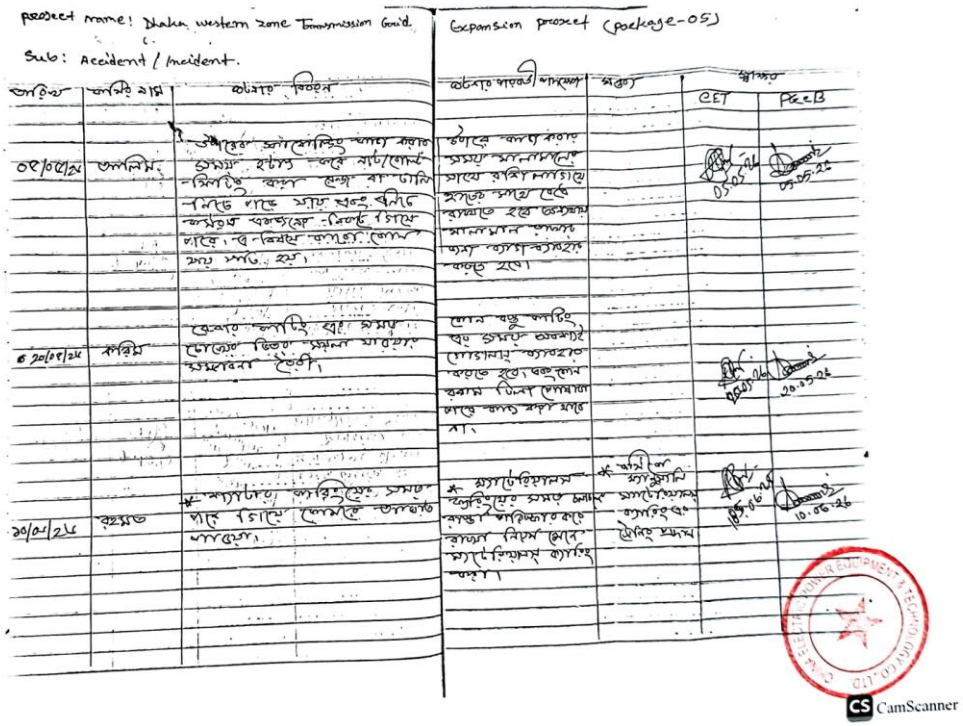
51	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	0.0	0.0
52	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	4.0	0.0
53	FIRE BUCKET STAND; TYPE :- T type;	Numbers	N/A	
54	SAFETY 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	
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

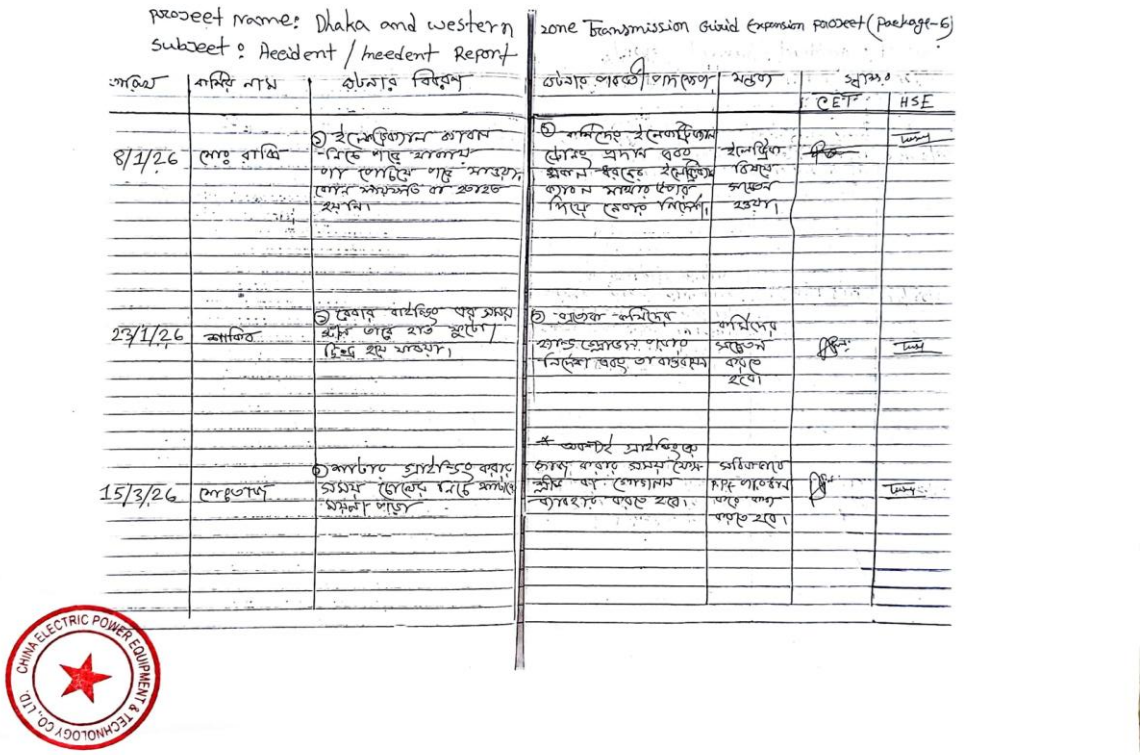
Package 5

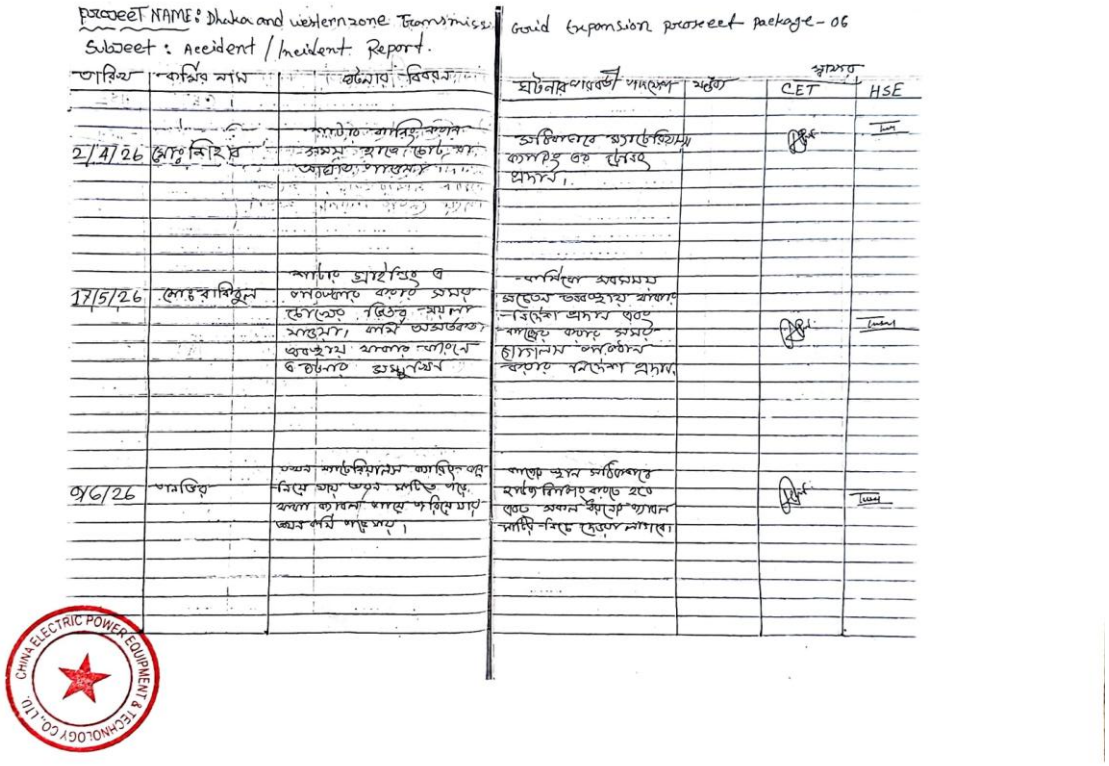





project name: Dhaka western zone Transmission Guid.
Expansion project (package-05)
Sub: Accident / Incident.
CET
PEEB
CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO.,LTD.
CamScanner

Package 6


project name: Dhaka and western zone Transmission Guid Expansion project (package-6)
Subject: Accident / Incident Report
CET
HSE
8/1/26
23/1/26
15/3/26
CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO.,LTD.


Subject : Accident / Incident Report.
CET
HSE
CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

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	ME & CCS

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

DOCUMENT NAME
Incident Report -February 2026

CamScanner

FINAL INCIDENT REPORT

REFERENCE NUMBER:	01	SECTION:	Construction
REPORTED DATE & TIME:	03.02.26	LOCATION:	Site Office
REPORTED BY:	Md. Naymur Rahman	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:		Foot			
OCCUPATION OF IP:	n/a			DATE OF JOINING:		10.01.26			
COMPANY:	CCS			ACTIVITY WHEN INCIDENT HAPPENS:		Working point going Time			

BRIEF DESCRIPTION OF THE INCIDENT:

On 03 Feb 2026 (Tuesday) at around 11:20 AM, Incident happened at Rupsha 230/132/33 kv GIS Sub Station . As per investigation & according to CCS Project Manager MD Saymon Parvez and EHS Engineer Md Naymur Rahman ,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. Naymur Rahman	POSITION:	EHS Engineer	SIGN:	Naymur.
CHECK BY:	Saymon Parvez	POSITION:	Project MANAGER	SIGN:	Saymon

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FINAL INCIDENT REPORT

Image Incident Person



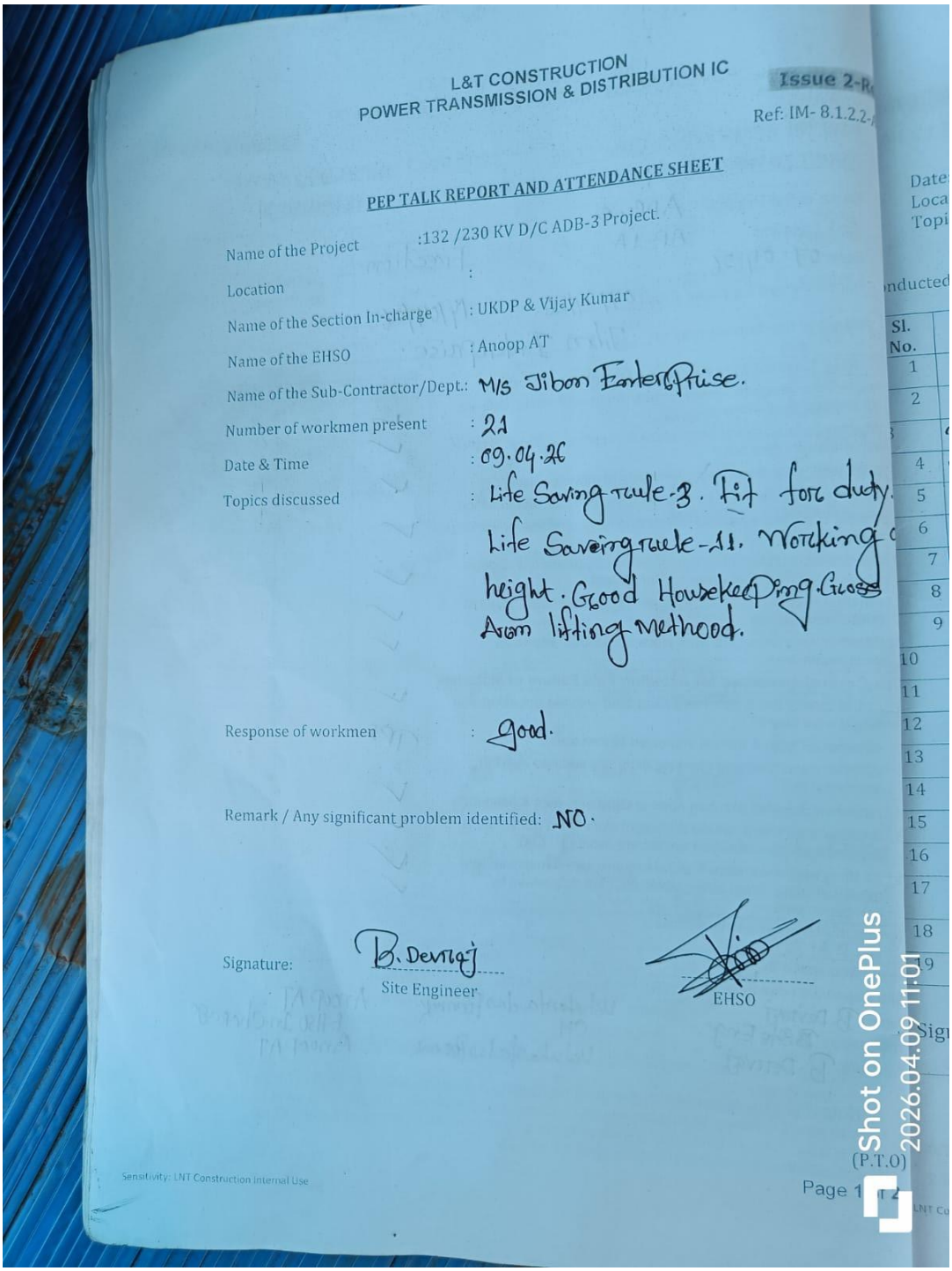


ENGINEERS / EMPLOYERS COMMENT:			
The worker must be use safety shoes in work place. without safety shoes no work			
DATE:	NAME:	POSITION:	SIGNATURE:
03.02.26	Main Uddin	SE	

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Annexure-31: TBT Participant List

Package 3



L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-R

Ref: IM- 8.1.2.2-

PEP TALK REPORT AND ATTENDANCE SHEET

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

Location :

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

Name of the EHSO : Anoop AT

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

Number of workmen present : 21

Date & Time : 09.04.26

Topics discussed : Life Saving rule-3. Fit for duty. Life Saving rule-11. Working height. Good Housekeeping. Gross Arm lifting method.

Response of workmen : good.

Remark / Any significant problem identified: NO.

Signature: B. Devraj
Site Engineer

EHSO

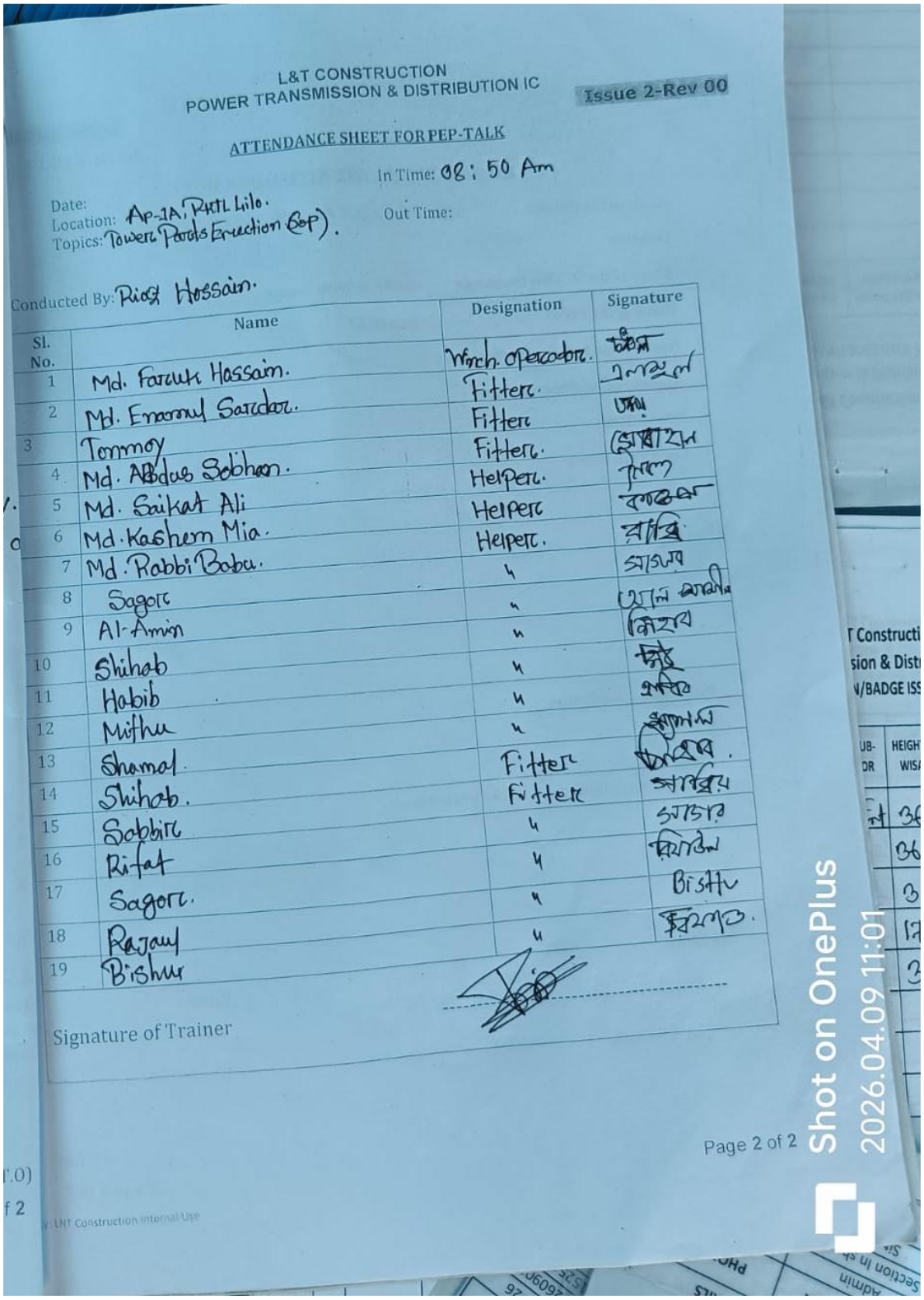
Sl. No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Sensitivity: LNT Construction Internal Use

(P.T.O)

Page 1

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L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00

ATTENDANCE SHEET FOR PEP-TALK

In Time: 08 : 50 Am

Date:
Location: AP-1A, RHTL Lilo.
Topics: Towers Parts Erection (SOP).

Out Time:

Conducted By: Riaz Hossain.

Sl. No.	Name	Designation	Signature
1	Md. Faruk Hassain.	Mech. operator.	
2	Md. Enamul Sardar.	Fitter.	
3	Tonmoy	Fitter	
4	Md. Abdus Sobhan.	Fitter.	
5	Md. Saikat Ali	Helper.	
6	Md. Kashem Mia.	Helper	
7	Md. Rabbi Babu.	Helper.	
8	Sagor	〃	
9	Al-Amin	〃	
10	Shihab	〃	
11	Habib	〃	
12	Mithu	〃	
13	Shamal.	Fitter	
14	Shihab.	Fitter	
15	Sabbir	〃	
16	Rifat	〃	
17	Sagor.	〃	
18	Rajaul	〃	
19	Bishu	〃	

Signature of Trainer

Page 2 of 2

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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: Domar to Hatibandha 132 KV DCTL PROJECT CODE: 67-470E
TOOL BOX/MEETING DATE: 28-01-26
LOC./VENUE: 313
TIME: 7:30AM
Number of workers Participation: 25 nos
TOPIC Discussed: (As per work process) 1.
2.
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	MD. Aimt		10		
2	MD. Hsidaly		11		
3	MD. Sefat		12		
4	MD Pavvez		13		
5	MD. Fahim		14		
6	MD. Shaikl		15		
7	MD. Ripon		16		
8			17		
9			18		

MD. Rubel Sheikh.
Signature of Site Supervisor/ Site Engg.

HSE Officer/Engg.

FOR
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

Page | 1

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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: ADB Project Bangladesh
PROJECT CODE: G- 479 (F)
TOOL BOX/MEETING DATE: 01/04/20
LOC./VENUE: 23/2
TIME: 8.00 AM
Number of workers Participation: 20
TOPIC Discussed: (As per work process) 1. Check Jin Pole condition.
2. Check Pulleys condition.
3. Check 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. Al-amin	Alamin	10	Md. Monsur	মনসুর
2	Md. Ripon	Ripon	11	Md. Shihab	শিহাব
3	Md. Sourov	Sourov	12	Md. Atik	আতিক
4	Md. Mamun	মামুন	13	Md. Shobnil	শ্বপ্নিল
5	Md. Rejaul.	রেজাউল	14	Md. Shohag	SOHAG
6	Md. Amirul	আমিরুল	15	Md. Nahid	নাহিদ
7	Md. Shahinur	শাহিনুর	16	Md. Al-Amin	Al-Amin
8	Md. Siam	সিয়াম	17	Md. Akash	আকাশ
9	Md. Nahid	নাহিদ	18	Md. Romjan	রমজান

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

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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Page | 1

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(30)

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 Bojeet Bangladesh PROJECT CODE: Gr 479(15)

TOOL BOX/MEETING DATE: 13.05.24

LOC./VENUE: 16/0

TIME: 8.00 Am

Number of workers Participation: 13

TOPIC Discussed: (As per work process) 1. Check Jinpole condition.
2. Check wire Rope condition.
3. Check Pulles 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	Mahabub		10	Raju	
2	Akul		11	Arman	
3	Pallab		12	Shuvo	
4	Sagor		13	Habibur	
5	Rakib		14		
6	Raju		15		
7	Asif		16		
8	Monirul		17		
9	Shibly		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

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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: ADB Package - 09 PROJECT CODE: 6-979A
TOOL BOX/MEETING DATE: 22.06.26
LOC./VENUE: 23/1
TIME: 8.00 AM
Number of workers Participation: 22 nos
TOPIC Discussed: (As per work process) 1. Fall protection devices.
2.
3. ⇒ Fall arrester clamp, use
4. ⇒ Ensure vertical lifeline
5. while Assecending/desscending from tower height.
⇒ Horezontal lifeline for moving
⇒ FBH safety belt Anchorage.

Remarks (If any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	Emamul		10	Joherul	
2	Ashek		11	Kamrul	
3	Sajedul		12	Sham	
4	Sagor		13	Amirul	Amirul
5	Sane	Soni	14	Naim	
6	Shafeed	Shyped	15	Kawsar	KAWSAR
7	Monirul		16	Mukter	Mukter
8	Hasan	HASAN	17	Aribul	
9	Sumon	SUMON	18	Biddek	

Signature of Site Supervisor/ I/C Site Engg.

HSE Officer/Engg.

Section/Project

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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Page | 1

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Package 5

Project Name: Dhaka and western Zone Transmission Grid Expansion project (P-05)

Date: 2/04/26 Time: 8:00 Am

TBM এর বিষয় কমু:-

১। কাজে করার পূর্বে ইলেকট্রিক লাইন সঠিক ভাবে চেক করে নিতে হবে।
২। নির্দিষ্ট অপারেটর ছাড়া কেউ ডি.বি কেউ হাত লাগাবেন না।
৩। কন্ডাক্টর ও টুলস ছোয়া ও সাইটে কাজের উপযোগী না।

SL	Workers Name	SL	Workers Name
01.	Sumon	22.	Apu khan
02.	Hossen	23.	Samim
03.	Ezanur	24.	Nayem
04.	Jafor	25.	elijas
05.	Kayes	26.	Mehrab
06.	Rihan	27.	Alamin
07.	Liton	28.	Liton
08	Nasirul	29.	Hossen Molla
09.	Foysal	30.	Abu kalam
10.	Sakil	32.	Hossen
11.	Osman	33.	Harun
12.	Roshidul	34.	Farzik
13.	Rubel	35.	Nobab
14.	Emon	36.	Milon
15.	Babul	37.	Rakib Rana
16.	kaiser	38	kuddus
17.	Forhad	39.	Mohor
18.	Asif	40.	Jahid
19.	Sumon	41.	Asif
20.	Rafi	42.	Sakib
21.	Doyel.	43.	Haider



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Sl	Worker Name	Sl	Worker Name
44	Sumon	74	Sofik
45	Hossen	75	Akter
46	Ezanur	76	Kader
47	Jafor	77	Nobab
48	Kayes	78	Eliyas
49	Raihan	79	Mobarab
50	Liton	80	Hasem
51	Nasir	81	Kamal
52	Sakil	82	Harun
53	Osman	83	Alamin
54	Rubel	84	Romjan
55	Shakib	85	Mona
56	Farok	86	Liton
57	Babul	87	Rip-on
58	Asif	88	Kawsar
59	Rafi	89	Waizd
60	Babu	90	Arsan
61	Doyel	91	Billal
62	Opu	92	Sopon
63	Samim	93	Imon
64	Nayem	94	Mainuddin
65	Ramim	95	Mostafa
66	Rakib	96	Hamim
67	Akash	97	Soruf
68	Haider	98	Simul
69	Minaz	99	Limon
70	Murad	100	Robiul
71	Rofik	101	Taher
72	Atawr		
73	Jibon		

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project Name: Dhaka and western zone Transmission Grid Expansion project (P-05)

Date: 15/04/26 Time: 8:00 a.m.

TBM এর বিষয় বস্তু:—

১। উচ্চতায় কাজ করার সময় অবশ্যই সেফটি বেল্ট ব্যবহার করে কাজ করতে হবে।

২। সেফটি বেল্ট সঠিক ভাবে পরিধান করতে হবে।

৩। প্রতিদিন সেফটি বেল্ট চেক করতে হবে।

SL	Workers Name	SL	Workers Name
01.	Sumon	22.	Apu khan
02.	Hossen	23.	Samim
03.	Ezanur	24.	Nayem
04.	Jafor	25.	Eliyas
05.	kayes	26.	Mehrab
06.	Rathan	27.	Alamin
07.	Liton	28.	Hosen
08.	Nasirul	29.	Molla
09.	Faysal	30.	kalam
10.	Sakil	31.	Farzak
11.	Osman	32.	Harun
12.	Rashedul	33.	Nobab
13.	Rubel	34.	Milon
14.	Imran	35.	Rakib Rana
15.	Babul	36.	kuddus
16.	kaiser	37.	Mohor
17.	Forhad	38.	Rakib
18.	Asif	39.	Akas
19.	Sumon	40.	Haider
20.	Rafi	41.	Minar
21.	Doyel	42.	Murad

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SL	Worker Name	SL	Worker Name
43	Gazi	73	Robiul
44	Akash	74	Samin
45	Manik	75	Faruk
46	Nayan	76	Apeel
47	Lavlu	77	Taher
48	Riyaz	78	Minhaz
49	Belal	79	Jahid
50	Hamim	80	Siyam
51	Tamim	81	Jamil
52	Asik	82	Sakil
53	Mehedi	83	Molla
54	Alif	84	Imran
55	Rafi	85	Tafazzal
56	Razu	86	Razzak
57	Sumon	87	Sakib
58	Foysal	88	Sohel
59	Rubel	89	Tusar
60	Jafor	90	Kader
61	Osman	91	Kaiyam
62	Hadi	92	Manik
63	Sohel	93	Sakil-B
64	Emon	94	Forhad
65	Hossain	95	Asraf
66	Awlad	96	Maruf
67	Milon		
68	Azahar		
69	Romzan		
70	AL- Amin		
71	Razu		
72	Hasan		

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO.,LTD.

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Package 6

Project Name: [illegible]

Package-06

Date: 3/5/26

Time:- 8:00 AM.

[illegible]

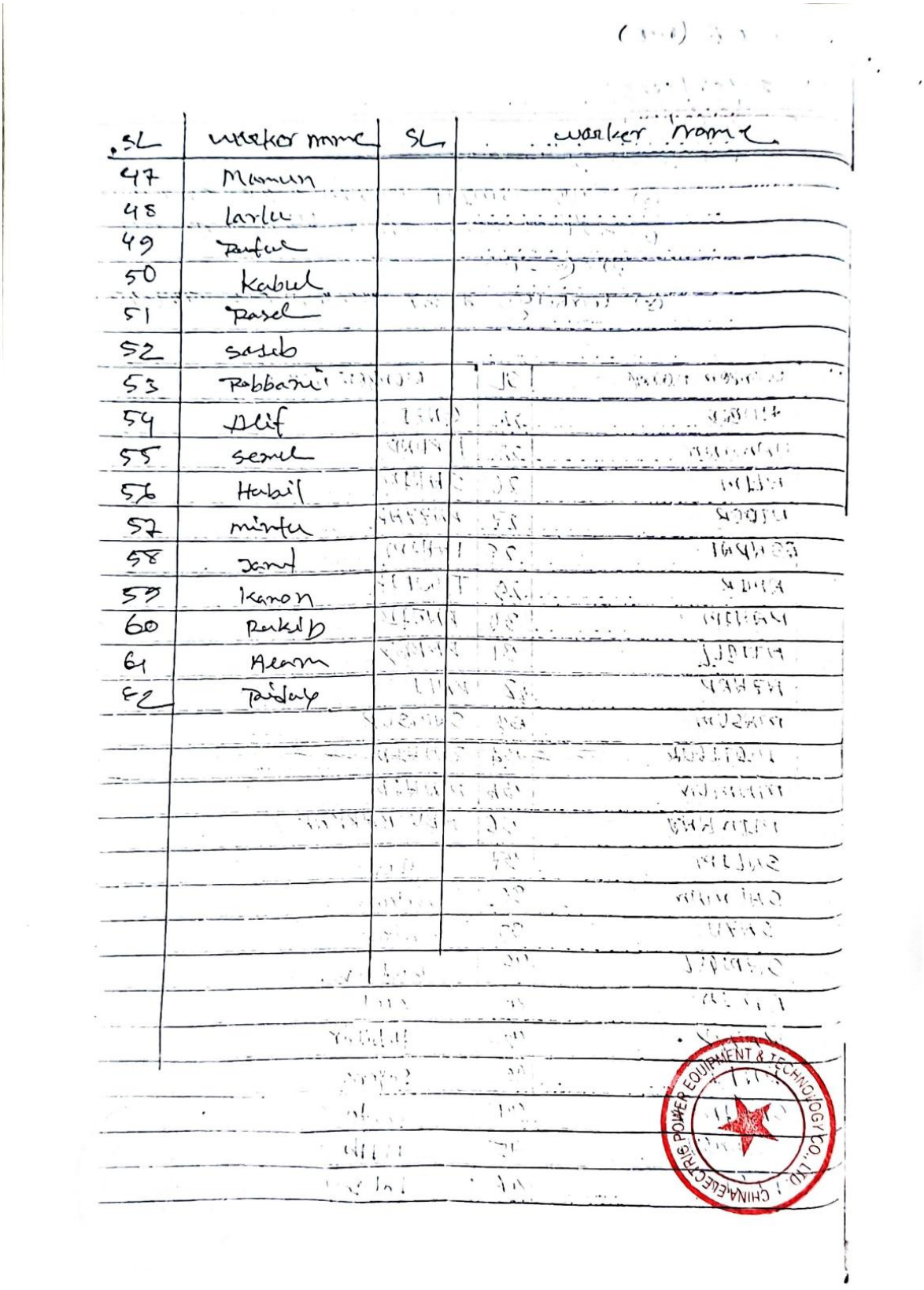
① [illegible]

② [illegible]

③ [illegible]

SL	Worker name	SL	Worker name
1	HABID	24	GAZI
2	HANNAN	25	FORHAD
3	ALIM	26	SAHIN
4	AIOUR	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	Kutub.
18	AMIN	41	Alal
19	RAZZK.	42	Hobibor
20	RAFI	43	Sajem
21	SAHINUR	44	Santo
22	SAMSUR	45	Habib
23	RASEL	46	Lal Dey

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.



SL	worker name	SL	worker name
47	Mamun		
48	Jarlu		
49	Tarfuel		
50	Kabul		
51	Rasel		
52	Sasib		
53	Rabbani		
54	Alif		
55	Semul		
56	Habil		
57	Mintu		
58	Jamal		
59	Kanon		
60	Rakib		
61	Alamin		
62	Tajul		

Package 7

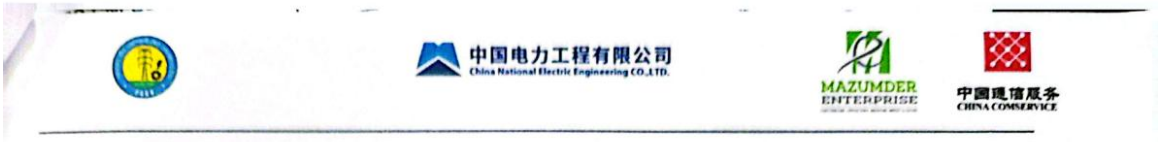
PROJECT NAME
DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230/132/33KV GIS SUBSTATION AT RUPSHA AND 132/33Kv GIS SUBSTATION AT PHULTOLA, MONIRAMPUR, MAHESHPUR, MEHERPUR ON TURNKEY BASIS (PACKAGE-7)

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

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

DOCUMENT NAME
GANG induction Sheet-February 2026

CamScanner



GANG induction

Project Name: 230/132/33kvGISSubstation at Rupsha.
Date: 05-Feb-2026

Every new worker must a safety briefing before starting work. This ensures the provision of safety and protective equipment.

Safety Procedures: Skilled workers are required to operate machinery and equipment. Unskilled workers cannot operate them. Workers must work according to their designation. Machinery and equipment must be checked before starting work. This can help avoid accidents at work.

Site-Specific Rules: Specific rules and regulations must be followed for the construction site. Workers' restrooms, wash rooms, are located at specific locations. While moving on the site, you must move on the displayed roads. Before starting work, a safety briefing must be conducted at the designated location.

Personal protective equipment (PPE): Helmet, safety glasses, gloves and boots are required. Adequate safety equipment must be used. Working in hazardous areas must be avoided.

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

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

GANG Induction

Project Name: Rupsha Substation
Date: 05.02-2026

Sl no:	Worker Name	Designation	Signature
1	আরিফুর	মিস্ত্রি	আরিফুর
2.	রাকিব	মিস্ত্রি	রাকিব
3.	সাজ্জাদ	হেলপার	সাজ্জাদ
4	রাশেদ	হেলপার	রাশেদ
5.	মামুন	সার্ভেয়ার	মামুন
6.	কাবিয়ো	ইলেক্ট্রিশিয়ান	কাবিয়ো
7	মোমিন	সুপারভাইজার	মোমিন
8.	রিয়াজুল	হেলপার	রিয়াজুল
9.	সাহাদাত	মিস্ত্রি	সাহাদাত
10.	জাহিদ	হেলপার	জাহিদ
11.	সালমান	হেলপার	সালমান

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Annexure-32: Environmental Monitoring Pictures

Package 1

Air Quality



AQ1 Near T-1/0



AQ2 Near T-4/0

Noise Quality





NL1 Near TT-1/0





NL2 Near T-4/0

Surface Water Sampling

	
SW1 Near T-1/0	SW2 Near T-4/0
Ground Water Sampling	
	
GW1 Near T-1/0	GW2 Near T-4/0
Soil Sampling	
	
SQ1 Near T-1/0	SQ2 Near T-4/0

Package 3

Air Quality



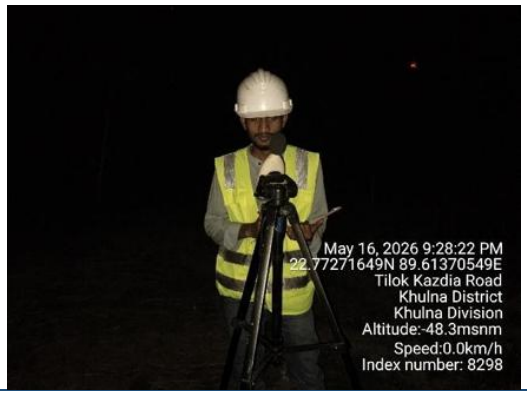
AQ6 Kudir Bottola, Khulna



AQ7 Vadgati, Batiaghata, Khulna

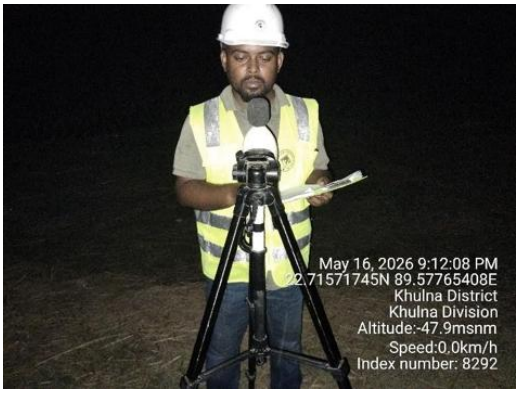
Noise Quality





NL6 Kudir Bottola, Khulna





NL7 Vadgati, Batiaghata, Khulna

Surface Water Sampling

	
SW6 Kudir Bottola, Khulna	SW07 Vadgati, Batiaghata, Khulna
Ground Water Sampling	
	
GW6 Kudir Bottola, Khulna	GW7 Vadgati, Batiaghata, Khulna
Soil Sampling	
	
SQ6 Kudir Bottola, Khulna	SQ7 Vadgati, Batiaghata, Khulna

Package 4

	
AQ18 T-2/0 (Bagerhut Pirojpur Bhandaria)	AQ23 T-1/0 (Purba Sadipur- Domar)
	
NL18 T-2/0 (Bagerhut Pirojpur Bhandaria)	NL23 T-1/0 (Purba Sadipur- Domar)
	
SW18 T-2/4 (Bagerhut Pirojpur Bhandaria)	SW19 AP-12 (Purba Sadipur- Domar)

	
GW18 T-2/4 (Bagerhut Pirojpur Bhandaria)	GW19 AP-12 (Purba Sadipur- Domar)
	
SQ18 T-5/0 (Bagerhut Pirojpur Bhandaria)	SQ19 T-8/0 (Purba Sadipur- Domar)

Package 5

	
AQ38 In front of Hafej Sheikh's House	AQ39 Located Near Nolir Bridge





NL 38, In front of Hafej Sheikh's House





NL 39, Beside Kaliganj- Kapasia Rd. located near Nolir Bridge



SW 23 Nolir Khal



SW 24 Nolir Khal



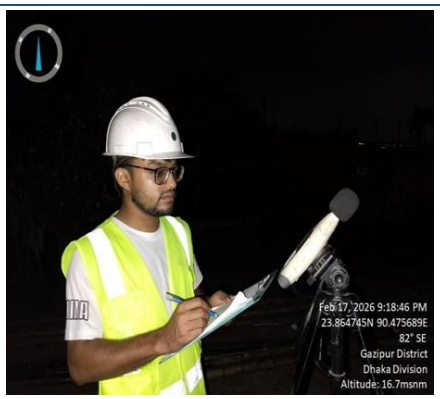
GW 23 Hafej Sheikh's House near Nolir Bridge



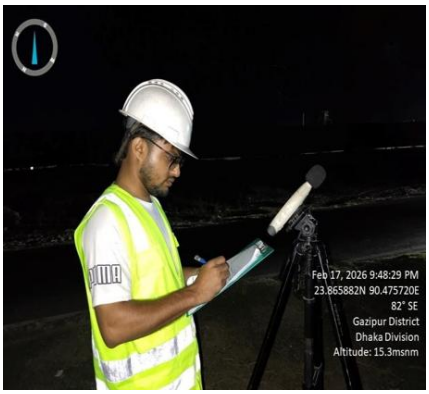
GW 24 Beside Kaliganj- Kapasia Rd. located

	
SQ 23 Hafej Sheikh's House	SQ 24 Beside Kaliganj- Kapasia Rd. located near Nolir Bridge

Package 6

	
AQ42 In front of Dulal Mia's house	AQ43 In front of Dipak Chakraborty' s Shop
	
NL 42 In front of Dulal Mia's house	





NL 43 In front of Dipak Chakraborty' s Shop



SW 27 Nolir Khal



SW 28 Nolir Khal



GW 27 Beside Dulal Mia's Shop



GW 28 Beside Dipak Chakraborty' s Shop

	
SQ 27 In front of Dulal Mia's house	SQ 28 In front of Dipak Chakraborty's Shop

Package 7

	
AQ46 Near 132/33 kV GIS substation at Phultola	AQ47 Near 230/132/33 kV GIS substation at Rupsha

	
NL 46 Near 132/33 kV GIS substation at Phultola	





NL 47 Near 230/132/33 kV GIS substation at Rupsha



SW-31 Near 132/33 kV GIS substation at Phultola



SW-32 Near 230/132/33 kV GIS substation at Rupsha



GW 31 Near 132/33 kV GIS substation at Phultola



GW 32 Near 230/132/33 kV GIS substation at Rupsh

	
SQ 31 Near 132/33 kV GIS substation at Phultola	SQ 32 Near 230/132/33 kV GIS substation at Rupsha

Annexure-33: Environmental Monitoring Lab Sheet

Package 1

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Ref: ECIL/2026/01-03/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	: 01.03.2026 – 03.03.2026
Date of Analysis	: 04.03.2026 – 12.03.2026
Reporting Date	: 15.03.2026

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	9.56	14.74	3.68	1.14	24.43	37.37	79.85	291.19
2	**AAQM-2 (T 4/1, kaliganj, Gazipur)** 23.961542N; 90.554966E	6.22	10.47	3.54	1.10	12.69	23.16	41.68	241.95
3	**AAQM-3 (T 2/3, kaliganj, Gazipur)** 23.947302N; 90.557246E	6.76	10.11	2.94	1.09	13.24	25.03	51.35	261.72
4	**AAQM-4 (AP 2/0, kaliganj, Gazipur)** 23.936901N; 90.559124E	7.73	11.63	3.53	1.16	14.42	21.61	44.53	270.12
5	**AAQM-5 (AP 3/0, kaliganj, Gazipur)** 23.953659N; 90.555345E	15.68	17.64	2.88	1.36	20.02	31.25	70.74	293.07
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; APCR'22 does not specify any standard limit for 24-hour monitoring.

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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	: 01.03.2026 – 03.03.2026
Date of Analysis	: 04.03.2026 – 12.03.2026
Reporting Date	: 15.03.2026

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	57.44	74.63	34.27	43.29	65.8	32.3	Mixed Zone
NL-2, P 4/1, Kaliganj, Gazipur 23.961558N; 90.554945E	49.94	68.49	31.37	38.41	59.3	33.5	Silent Zone
NL-3, T 2/3, Kaliganj, Gazipur 23.947304N; 90.557165E	46.66	69.60	33.28	39.68	56.7	31.8	Silent Zone
NL-4, AP 2/0, Kaliganj, Gazipur 23.936917N; 90.559105E	48.29	73.64	32.19	37.47	54.9	32.9	Mixed Zone
NL-5, AP 3/0, Kaliganj, Gazipur 23.953604N; 90.555474E	54.70	75.17	32.88	42.89	68.6	30.9	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 2025, Schedule 1 (Zone Based Noise Level Standard): *ECIL* Laboratory, March, 2026

*Exceeds the Standard

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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	: 01-03 March, 2026

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
01	Arsenic	UVS	mg/L	0.17	0.22	0.16	0.29	0.21	NYS
02	Coliform (Faecal)	MFM	CFU/100 ml	130	220	170	360	300	NYS
03	Coliform (Total)	MFM	CFU/100 ml	260	380	290	560	500	≤50,000
04	Iron (Fe)	AAS	mg/L	1.3	2	1.1	3.4	2.2	NYS
05	Manganese (Mn)	AAS	mg/L	0.3	0.39	0.27	0.55	0.43	NYS
06	pH	pH Meter	-	7.3	7.5	7.4	7.8	7.6	6.5-8.5
07	Turbidity	Turbidity Meter	NTU	30	42	21	150	68	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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30.03.2026	30.03.2026	30.03.2026

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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	: 01-03 March, 2026

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	1.9	2.2	2.1	3.3	2.7	NYS
09	Biochemical Oxygen Demand (BOD)	mg/L	5 days Incubation	9	10.5	9.8	17.2	13.5	≤12
10	Chemical oxygen Demand (COD)	mg/L	CRM	40	50	45	90	68	100
11	Dissolved Oxygen	mg/L	Multimeter	5.4	4.9	5.3	3.3	4.2	NYS
12	Total Dissolved Solids (TDS)	mg/L	Multimeter	430	500	470	650	580	NYS
13	Total Suspended Solid (TSS)	mg/L	Gravimetric	130	180	160	390	250	1000
14	Oil & Grease	mg/L	5520.B	1.3	2.5	2.9	2.2	1.6	NYS
15	Total Nitrogen	mg/L	UVS	3	3.9	3.5	6.5	5	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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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	: 01-03 March, 2026

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	0.32	0.47	0.24	0.58	0.42	1.50
2	Arsenic	mg/L	AAS	0.021	0.038	0.028	0.031	0.019	0.05
3	Biochemical Oxygen Demand (BOD)	mg/L	5 days Incubation	0.9	1.1	0.7	1.4	1.1	NYS
4	Chemical oxygen Demand (COD)	mg/L	CRM	6.5	8.5	5.8	11	7.5	NYS
5	Chloride	mg/L	Titrimetric	125	135	115	145	128	250
6	Coliform (Faecal)	CFU/100 ml	MFM	0	0	0	0	0	0
7	Coliform (Total)	CFU/100 ml	MFM	0	0	0	0	0	0
8	Iron (Fe)	mg/L	AAS	0.68	0.85	0.55	0.48	0.35	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
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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	: 01-03 March, 2026

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	0.2	0.23	0.28	0.21	0.25	0.4
10	pH	-	pH Meter	7.3	7.2	7	7.4	7.3	6.5-8.5
11	Phosphate	mg/L	UVS	0.28	0.48	0.25	0.55	0.43	NYS
12	Salinity	ppt	Multimeter	0.11	0.05	0.14	0.09	0.11	NYS
13	Turbidity	NTU	Turbidity Meter	2.3	2.9	2.6	2.7	3.1	5
14	Electrical Conductivity (EC)	mS/cm	Multimeter	228	190	210	185	220	NYS
15	Hardness	mg/L	Titrimetric	13	15	16	12	14	500
16	Temperature	°C	Thermometer	26	27	25	28	26	20-30
17	Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.05	0.06	0.04	0.08	0.05	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
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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	: 01-03 March, 2026

LABORATORY TEST RESULTS

SN	Parameters	Unit	Concentration					Dutch Standard
			SC-1	SC-2	SC-3	SC-4	SC-5	
1	Calcium (Ca)	mg/kg	830	740	900	890	850	NYS
2	Copper (Cu)	mg/kg	0.05	0.06	0.08	0.09	0.07	36
3	EC	dS/m	0.34	0.39	0.30	0.46	0.41	NYS
4	Iron	mg/kg	3100	3300	3700	3200	3400	NYS
5	pH	–	6.5	6.9	6.7	7.2	6.8	NYS
6	Cadmium (Cd)	mg/kg	0.19	0.21	0.22	0.27	0.25	0.8
7	Chromium (Cr)	mg/kg	25	34	33	28	32	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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30.03.2026	30.03.2026	30.03.2026

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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	: 01-03 March, 2026

LABORATORY TEST RESULTS

SN	Parameters	Unit	Concentration					Dutch Standard
			SC-1	SC-2	SC-3	SC-4	SC-5	
1	Calcium (Ca)	mg/kg	830	740	900	890	850	NYS
2	Copper (Cu)	mg/kg	0.05	0.06	0.08	0.09	0.07	36
3	EC	dS/m	0.34	0.39	0.30	0.46	0.41	NYS
4	Iron	mg/kg	3100	3300	3700	3200	3400	NYS
5	pH	–	6.5	6.9	6.7	7.2	6.8	NYS
6	Cadmium (Cd)	mg/kg	0.19	0.21	0.22	0.27	0.25	0.8
7	Chromium (Cr)	mg/kg	25	34	33	28	32	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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30.03.2026	30.03.2026	30.03.2026

Package 3

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Ref: ECIL/2026/41-06/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	: 16.05.2026-20.05.2026
Date of Analysis	: 23.05.2026-08.06.2026
Reporting Date	: 10.06.2026

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	Pb
1	**AAQM-1** (Kudir Bottola, Khulna) 22.772409N; 89.616823E	16.01	17.32	5.36	1.53	17.34	28.49	49.17	301.15	BDL
2	**AAQM-2 (Vadgati, Batiaghata, Khulna)** 22.715719N; 89.577748E	7.14	9.91	4.41	0.96	16.66	27.98	59.45	286.73	BDL
3	AAQM-3 (Bagdari Bazar, Dumuria, Khulna) 22.733853N; 89.415113E	6.18	8.65	3.99	0.93	13.92	23.46	37.32	256.58	BDL
4	**AAQM-4 (Chorgram, Tala, Satkhira)** 22.740735N; 89.256071E	11.17	13.73	4.03	0.86	16.65	30.15	56.32	232.57	BDL
5	**AAQM-5 (Magura, Satkhira)** 22.741249N; 89.091239E	19.90	28.87	4.33	1.15	22.06	32.32	67.21	251.21	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		**NYS**	**65**	**150**	**NYS**	**100**	**80**	**80**	**5**	**0.5**
IFC EHS Guidelines' 30 April 2007		**NYS**	**25**	**50**	**NYS**	**100**	**20**	**200/1 hr.**	**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

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Ref: ECIL/2026/41-06/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	: 16.05.2026-20.05.2026
Date of Analysis	: 23.05.2026-08.06.2026
Reporting Date	: 10.06.2026

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	Pb
6	AAQM-6 (Protappur, Keshobpur, Jashore) 22.868778N; 89.185722E	9.45	18.16	4.89	1.34	17.91	27.32	64.29	229.42	BDL
7	AAQM-7 (Aminpur,Keshobpur, Jashore) 22.960354N; 89.229797E	17.55	21.54	5.01	1.69	19.12	41.25	75.81	252.87	BDL
8	AAQM-11 (Battail, Boro Pukur Par, Kustia) 23.873121N; 89.092463E	19.89	27.64	8.87	1.97	45.01	68.87	129.94	332.53	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		**NYS**	**65**	**150**	**NYS**	**100**	**80**	**80**	**5**	**0.5**
IFC EHS Guidelines' 30 April 2007		**NYS**	**25**	**50**	**NYS**	**100**	**20**	**200/1 hr.**	**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***
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B.Sc. in Environmental Science (KU)	B.Sc. in ESRM (MBSTU)	B.Sc. in ESRM (MBSTU)
Consultant (Environment)	MS in Environmental Science (MBSTU)	MS in Environmental Science (BAU)
	Technical Manager	Quality Manager

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Phone: +88 0255087283, Web: www.envirocarebd.com, Email: info@envirocarebd.com

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

Ref: ECIL/2026/41-06/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	: 16.05.2026-20.05.2026
Date of Analysis	: 23.05.2026-08.06.2026
Reporting Date	: 10.06.2026

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	Pb
9	AAQM-12 (Malihad, Mirpur, Kushtia) 23.841134N; 88.914512E	9.86	11.74	4.62	1.49	11.36	20.32	36.41	277.59	BDL
10	AAQM-13 (Baghdanga, Kushtia Sadar, Kushtia) 23.841030N; 89.035337E	6.64	12.67	4.78	1.30	12.63	27.22	47.28	253.26	BDL
11	AAQM-14 (Gopalnagar, Gangni, Meherpur) 23.827057N; 88.777141E	7.32	10.72	3.65	1.21	13.40	27.44	43.65	282.74	BDL
12	AAQM-15 (Natun Modondanga, Shampur, Meherpur) 23.791050N; 88.679091E	9.12	14.61	5.81	1.68	22.34	38.56	67.38	326.45	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		**NYS**	**65**	**150**	**NYS**	**100**	**80**	**80**	**5**	**0.5**
IFC EHS Guidelines' 30 April 2007		**NYS**	**25**	**50**	**NYS**	**100**	**20**	**200/1 hr.**	**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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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)
	Technical Manager	Quality Manager

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Ref: ECIL/2026/40-06/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	: 16.05.2026-20.05.2026
Date of Analysis	: 23.05.2026-08.06.2026
Reporting Date	: 10.06.2026

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	57.45	73.64	41.24	50.10	68.7	40.4	Mixed Zone
NL-2, Vadgati, Batiaghata, Khulna 22.715719N; 89.577748E	55.24	70.24	38.21	41.61	57.6	33.3	Mixed Zone
NL-3, Bagdari Bazar, Dumuria, Khulna) 22.733853N; 89.415113E	57.61	74.87	41.14	41.35	59.2	35.3	Mixed Zone
NL-4, Chargram Tala, Satkhira 22.740735N; 89.256071E	44.35	61.35	32.41	38.06	55.3	31.1	**Silent**
NL-5, Magura, Satkhira) 22.741249N; 89.091239E	64.45	81.56	46.69	47.71	65.4	41.5	Mixed Zone
NL-6, Protappur, Keshobpur,Jashore 22.868778N; 89.185722E	53.56	71.34	36.45	40.47	57.8	33.6	Mixed Zone
NL-7,Aminpur, Keshobpur, Jashore 22.960354N; 89.229797E	51.49	68.24	36.61	40.10	58.6	33.2	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, 2026

*Exceeds the Standard

EnviroCare International Ltd. Dhaka

Prepared By	***Reviewed By***	***Approved By***
Md Mehrab Hossain Manik	Sanjoy Kumar Mondol	Shorov Roy
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Ref: ECIL/2026/40-06/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	: 16.05.2026-20.05.2026
Date of Analysis	: 23.05.2026-08.06.2026
Reporting Date	: 10.06.2026

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	66.87	33.35	37.87	56.7	31.3	Silent Zone
NL-12, Malihad, Mirpur, Kushtia 23.841134N; 88.914512E	50.17	68.43	34.07	39.35	57.4	30.8	Residential Zone
NL-13, Baghadanga, Kushtia Sadar, Kushtia 23.841030N; 89.035337E	47.54	65.04	32.35	40.20	57.7	30.9	Silent Zone
NL-14, Gopal Nagar, Gangni, Meherpur 23.827057N; 88.777141E	49.58	65.86	35.37	40.68	57.6	32.8	Mixed Zone
NL-15, Natun Modondanga, Shampur, 23.791050N; 88.679091E	54.78	70.84	37.41	40.78	58.6	33.1	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, 2026

*Exceeds the Standard

Envirocare International Ltd. Dhaka

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Md Mehrab Hossain Manik	Sanjoy Kumar Mondol	Shorov Roy
B.Sc. in Environmental Science (KU)	B.Sc. in ESRM (MBSTU)	B.Sc. in ESRM (MBSTU)
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Lab Memo: 620/1,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060101	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S : SW-1)	Union:, Vill.:Kudir Bottola
Sample Collection date: 16-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.58	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	20	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.80	mg/L	Multimeter	-
4	pH	6.5-8.5	7.3	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	580	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	58	mg/L	Gravimetric Method	-
7	Turbidity	10	44.5	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Countersigned/Approved by:
Signature	Signature
1.) Name: Md. Saiful Alam Khosru ✓ 16/06/2026 Designation: Sample Analyzer	1.) Name: Mita Sarker Designation: Senior Chemist
2.) Name: Taslima Akhter 16.06.2026 Designation: Sample Analyzer	2.) Name: Md. Biplab Hossain 16/06/2026 Designation: Chief Chemist Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/2,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060102	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S : SW-2)	Union:, Vill.:Batighata
Sample Collection date: 16-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	1.12	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	24	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.75	mg/L	Multimeter	-
4	pH	6.5-8.5	7.8	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	3350	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	62	mg/L	Gravimetric Method	-
7	Turbidity	10	9.71	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:

1.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer
Signature 16/06/2026

2.) Name: Taslima Akhter
Designation: Sample Analyzer
Signature 16.06.2026

Countersigned/Approved by:

1.) Name: Mita Sarker
Designation: Senior Chemist
Signature 16/06/2026

2.) Name: Md. Biplab Hossain
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/3,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060103	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S : SW-3)	Union:, Vill.:Bagdari Bazar, Dumuria
Sample Collection date: 17-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.56	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	16	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.65	mg/L	Multimeter	-
4	pH	6.5-8.5	7.9	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	420	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	38	mg/L	Gravimetric Method	-
7	Turbidity	10	36.6	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/4,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060104	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Satkhira, Upa:Tala
Care Taker: Green Guard Environmental Services (S : SW-4)	Union:, Vill.:Chargram
Sample Collection date: 17-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	1.33	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	20	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.30	mg/L	Multimeter	-
4	pH	6.5-8.5	8.1	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	460	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	36	mg/L	Gravimetric Method	-
7	Turbidity	10	28.5	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: Signature

1.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer
16/06/2026

2.) Name: Taslima Akhter
Designation: Sample Analyzer
16.06.2026

Countersigned/Approved by: Signature

1.) Name: Mita Sarker
Designation: Senior Chemist

2.) Name: Md. Biplab Hossain
Designation: Chief Chemist
16/06/2026
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
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Lab Memo: 620/5,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060105	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Satkhira, Upa:
Care Taker: Green Guard Environmental Services (S : SW-5)	Union:, Vill.:Magura
Sample Collection date: 18-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.62	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	16	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.20	mg/L	Multimeter	-
4	pH	6.5-8.5	7.8	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	300	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	158	mg/L	Gravimetric Method	-
7	Turbidity	10	114	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/6,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060106	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Jessore, Upa:
Care Taker: Green Guard Environmental Services (S : SW-6)	Union:, Vill.:Protappur, Keshobpur
Sample Collection date: 18-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.47	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4 0	12	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.95	mg/L	Multimeter	-
4	pH	6.5-8.5	8.1	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	210	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	20	mg/L	Gravimetric Method	-
7	Turbidity	10	13.4	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/7,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060107	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Jessore, Upa:
Care Taker: Green Guard Environmental Services (S : SW-7)	Union:, Vill.:Aminpur, Keshobpur
Sample Collection date: 19-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.63	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	4	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	6.00	mg/L	Multimeter	-
4	pH	6.5-8.5	8.1	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	240	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	24	mg/L	Gravimetric Method	-
7	Turbidity	10	6.40	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Countersigned/Approved by:
Signature	Signature
1) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer 16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist
2) Name: Taslima Akhter Designation: Sample Analyzer 16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist 16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/8,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060108	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by.Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist.Kushtia, Upa:
Care Taker: Green Guard Environmental Services (S : SW-11)	Union:, Vill.:Boro Pukur Par
Sample Collection date: 22-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.86	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	20	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.70	mg/L	Multimeter	-
4	pH	6.5-8.5	7.8	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	200	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	48	mg/L	Gravimetric Method	-
7	Turbidity	10	34.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:

1.) Name: Md. Saiful Alam Khosru — Signature — 16/06/2026
Designation: Sample Analyzer

2.) Name: Taslima Akhter — 16.06.2026
Designation: Sample Analyzer

Countersigned/Approved by:

1.) Name: Mita Sarker
Designation: Senior Chemist

2.) Name: Md. Biplab Hossain — Signature — 16/06/2026
Designation: Chief Chemist

Md. Biplab Hossain
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Department of Public Health Engineering
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Lab Memo: 620/9,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060109	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Kushtia, Upa:Mirpur
Care Taker: Green Guard Environmental Services (S:SW-12)	Union:, Vill.:Malihad
Sample Collection date: 21-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	2.54	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	72	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	3.96	mg/L	Multimeter	-
4	pH	6.5-8.5	7.5	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	340	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	68	mg/L	Gravimetric Method	-
7	Turbidity	10	97.1	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:

1.) Name: Md. Saiful Alam Khosru — Signature — 16/06/2026
Designation: Sample Analyzer

2.) Name: Taslima Akhter — 16.06.2026
Designation: Sample Analyzer

Countersigned/Approved by:

Signature

1.) Name: Mita Sarker
Designation: Senior Chemist

16/06/2026

2.) Name: Md. Biplab Hossain
Designation: Chief Chemist

Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
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Lab Memo: 620/10,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060110	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Kushtia, Upa:
Care Taker: Green Guard Environmental Services (S:SW-13)	Union:, Vill.:Baghdanga
Sample Collection date: 21-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.51	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	16	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	4.20	mg/L	Multimeter	-
4	pH	6.5-8.5	7.9	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	180	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	24	mg/L	Gravimetric Method	-
7	Turbidity	10	30.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/11,CC, DPHE, CL, Dhaka — Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060111	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Meherpur, Upa:Gangni
Care Taker: Green Guard Environmental Services (S:SW-14)	Union:, Vill.:Gopalnagar
Sample Collection date: 20-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.72	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	8	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	5.90	mg/L	Multimeter	-
4	pH	6.5-8.5	8.0	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	160	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	56	mg/L	Gravimetric Method	-
7	Turbidity	10	43.2	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: Signature

1.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer

2.) Name: Taslima Akhter
Designation: Sample Analyzer
16.06.2026

Countersigned/Approved by: Signature

1.) Name: Mita Sarker
Designation: Senior Chemist

2.) Name: Md. Biplab Hossain
Designation: Chief Chemist
16/06/2026
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/12,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060112	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Surface Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Meherpur, Upa:
Care Taker: Green Guard Environmental Services (S:SW-15)	Union:, Vill.:Shampur
Sample Collection date: 20-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	1.67	mg/L	UVS	0.10
2	Chemical Oxygen Demand (COD)	4.0	4	mg/L	CRM	-
3	Dissolved Oxygen (DO)	6.0	6.20	mg/L	Multimeter	-
4	pH	6.5-8.5	8.1	-	pH Meter	-
5	Total Dissolved Solid (TDS)	1000	200	mg/L	Multimeter	-
6	Total Suspended Solid (TSS)	10	14	mg/L	Gravimetric Method	-
7	Turbidity	10	17.3	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation

Test Performed by:	Countersigned/Approved by:
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer Signature 16/06/2026	1.) Name: Mita Sarker Designation: Senior Chemist
2.) Name: Taslima Akhter Designation: Sample Analyzer 16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist 16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Surface Water Sample

LABORATORY TEST RESULTS

Name of the Project	**: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)**
Name of the Client	**: L&T**
Description of sample	: Surface water
Location	:Khulna & Sathkhira
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 16.05.2026-22.05.2026

SN	Parameters	Unit	Analysis Method	Concentration						BD Standard ECR '2023 (Water usable for irrigation)	IFC EHS Standard '2007
				SW-1	SW-2	SW-3	SW-4	SW-5	SW-6		
1	Biochemical Oxygen Demand (BOD_5)	mg/L	5 days of incubation	3.14	4.56	5.29	6.81	8.84	5.37	≤12	30
2	Total Coliform (TC)	CFU/100	MFM	537	862	788	510	286	438	<50,000	400[a]
3	Total Organic Carbon (TOC)	%	UVS	8.21	5.26	8.07	9.35	7.47	7.53	NYS	NYS
4	Phosphate	mg/L	UVS	1.6	0.53	0.32	1.3	2.1	1.4	2	NYS

*National Standard for Inland Surface Water **(ECR, 2023; Schedule-2A_1)**

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

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
24.05.2026	24.05.2026	24.05.2026

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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Surface Water Sample

LABORATORY TEST RESULTS

Name of the Project	**: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)**
Name of the Client	**: L&T**
Description of sample	: Surface water
Location	:Khulna & Sathkhira
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 16.05.2026-22.05.2026

SN	Parameters	Unit	Analysis Method	Concentration						BD Standard ECR '2023 (Water usable for irrigation)	IFC EHS Standard '2007
				SW-7	SW-11	SW-12	SW-13	SW-14	SW-15		
1	Biochemical Oxygen Demand (BOD_5)	mg/L	5 days of incubation	8.55	3.19	5.03	4.76	7.91	4.92	≤12	30
2	Total Coliform (TC)	CFU/100	MFM	193	364	277	569	484	271	<50,000	400*
3	Total Organic Carbon (TOC)	%	UVS	5.31	4.25	5.82	5.14	4.64	2.65	NYS	NYS
4	Phosphate	mg/L	UVS	2.3	1.1	1.6	1.1	1.5	2.1	2	NYS

*National Standard for Inland Surface Water **(ECR, 2023; Schedule-2A_1)**

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

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
24.05.2026	24.05.2026	24.05.2026

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Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/13,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060113	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S:GW-1)	Union:, Vill.:Kudir Bottola
Sample Collection date: 16-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.002	mg/L	AAS	0.001
2	Chloride	150-600	700	mg/L	Titrimetic	-
3	EC	-	2280	µS/cm	Multimeter	-
4	Hardness	200-500	500	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.50	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	1.14	‰	Multimeter	-
9	Temperature	20-30	26.4	°C	Thermometer	-
10	Turbidity	10	13.3	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/14,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060114	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S:GW-2)	Union:, Vill.:Batighata
Sample Collection date: 16-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	400	mg/L	Titrimetic	-
3	EC	-	1420	µS/cm	Multimeter	-
4	Hardness	200-500	300	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.13	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.9	-	pH Meter	-
8	Salinity	-	0.71	‰	Multimeter	-
9	Temperature	20-30	26.1	°C	Thermometer	-
10	Turbidity	10	2.4	NTU	Turbidity Meter	-

Comments. Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/15,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060115	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Khulna, Upa:
Care Taker: Green Guard Environmental Services (S:GW-3)	Union:, Vill.:Bagdari Bazar, Dumuria
Sample Collection date: 17-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	110	mg/L	Titrimetic	-
3	EC	-	720	µS/cm	Multimeter	-
4	Hardness	200-500	415	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.13	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	8.2	-	pH Meter	-
8	Salinity	-	0.36	‰	Multimeter	-
9	Temperature	20-30	26.2	°C	Thermometer	-
10	Turbidity	10	2.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/16,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060116	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Satkhira, Upa:Tala
Care Taker: Green Guard Environmental Services (S:GW-4)	Union:, Vill.:Chargram
Sample Collection date: 17-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.059	mg/L	AAS	0.001
2	Chloride	150-600	50	mg/L	Titrimetic	-
3	EC	-	680	µS/cm	Multimeter	-
4	Hardness	200-500	400	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.07	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	0.34	‰	Multimeter	-
9	Temperature	20-30	26.0	°C	Thermometer	-
10	Turbidity	10	0.61	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003, Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/17,CC, DPHE, CL, Dhaka — Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060117	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka	Dist:Satkhira, Upa:
Care Taker: Green Guard Environmental Services (S:GW-5)	Union:, Vill.:Magura
Sample Collection date: 18-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.016	mg/L	AAS	0.001
2	Chloride	150-600	55	mg/L	Titrimetic	-
3	EC	-	740	µS/cm	Multimeter	-
4	Hardness	200-500	400	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.85	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.5	-	pH Meter	-
8	Salinity	-	0.37	‰	Multimeter	-
9	Temperature	20-30	26.1	°C	Thermometer	-
10	Turbidity	10	24.5	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by: Signature

1.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer — 16.06.2026

2.) Name: Taslima Akhter
Designation: Sample Analyzer — 16.06.2026

Countersigned/Approved by: Signature

1.) Name: Mita Sarker
Designation: Senior Chemist

2.) Name: Md. Biplab Hossain
Designation: Chief Chemist — 16/06/2026
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/18,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060118	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Jessore, Upa:Keshabpur
Care Taker: Green Guard Environmental Services (S:GW-6)	Union:, Vill.:Protappur
Sample Collection date: 18-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	40	mg/L	Titrimetic	-
3	EC	-	560	µS/cm	Multimeter	-
4	Hardness	200-500	350	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.12	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	8.0	-	pH Meter	-
8	Salinity	-	0.28	‰	Multimeter	-
9	Temperature	20-30	25.8	°C	Thermometer	-
10	Turbidity	10	2.6	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/19,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060119	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Jessore, Upa:Keshabpur
Care Taker: Green Guard Environmental Services (S:GW-7)	Union:, Vill.:Aminpur
Sample Collection date: 19-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.030	mg/L	AAS	0.001
2	Chloride	150-600	50	mg/L	Titrimetic	-
3	EC	-	720	µS/cm	Multimeter	-
4	Hardness	200-500	400	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.06	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.6	-	pH Meter	-
8	Salinity	-	0.36	‰	Multimeter	-
9	Temperature	20-30	26.0	°C	Thermometer	-
10	Turbidity	10	9.8	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/20,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060120	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Kushtia, Upa:
Care Taker: Green Guard Environmental Services (S:GW-11)	Union:, Vill.:Boro Pukurpar
Sample Collection date: 22-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.009	mg/L	AAS	0.001
2	Chloride	150-600	40	mg/L	Titrimetic	-
3	EC	-	600	µS/cm	Multimeter	-
4	Hardness	200-500	400	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.05	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.7	-	pH Meter	-
8	Salinity	-	0.30	‰	Multimeter	-
9	Temperature	20-30	26.1	°C	Thermometer	-
10	Turbidity	10	2.1	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/21,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060121	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Kushtia, Upa:Mirpur
Care Taker: Green Guard Environmental Services (S:GW-12)	Union:, Vill.:
Sample Collection date: 21-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.004	mg/L	AAS	0.001
2	Chloride	150-600	25	mg/L	Titrimetic	-
3	EC	-	510	µS/cm	Multimeter	-
4	Hardness	200-500	390	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.05	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.7	-	pH Meter	-
8	Salinity	-	0.25	‰	Multimeter	-
9	Temperature	20-30	26.3	°C	Thermometer	-
10	Turbidity	10	2.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Lab Memo: 620/24,CC, DPHE, CL, Dhaka

Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060132	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Kushtia Upa:
Care Taker: Green Guard Environmental Services (S:GW-13)	Union:, Vill.:Baghdanga
Sample Collection date: 21-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.015	mg/L	AAS	0.001
2	Chloride	150-600	25	mg/L	Titrimetic	-
3	EC	-	520	µS/cm	Multimeter	-
4	Hardness	200-500	300	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.18	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.9	-	pH Meter	-
8	Salinity	-	0.26	‰	Multimeter	-
9	Temperature	20-30	26.0	°C	Thermometer	-
10	Turbidity	10	2.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	Taslima 16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chomist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Government of the People's Republic of Bangladesh
Office of the Chief Chemist
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Lab Memo: 620/22,CC, DPHE, CL, Dhaka — Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060122	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Meherpur, Upa:Gangni
Care Taker: Green Guard Environmental Services (S:GW-14)	Union:, Vill.:
Sample Collection date: 20-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	15	mg/L	Titrimetic	-
3	EC	-	320	µS/cm	Multimeter	-
4	Hardness	200-500	210	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.09	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.6	-	pH Meter	-
8	Salinity	-	0.16	%	Multimeter	-
9	Temperature	20-30	26.1	°C	Thermometer	-
10	Turbidity	10	1.2	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	16/06/2026
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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Government of the People's Republic of Bangladesh
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Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 620/23,CC, DPHE, CL, Dhaka — Date: 16-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060123	Sample Receiving date: 23-05-2026
Ref. Memo No: GGES/2026/Nill & Dated: 23-05-2026	Sample Source: Ground Water
Sent by:Robin Ahmed ,Asst. Consultant (Environment) , Green Guard Environmental Services, Dhaka.	Dist:Meherpur, Upa:
Care Taker: Green Guard Environmental Services (S:GW-15)	Union:, Vill.:Shampur
Sample Collection date: 20-05-2026	Date of Testing: 23/05/2026-16/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	20	mg/L	Titrimetic	-
3	EC	-	460	µS/cm	Multimeter	-
4	Hardness	200-500	300	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.28	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	0.23	‰	Multimeter	-
9	Temperature	20-30	25.8	°C	Thermometer	-
10	Turbidity	10	5.3	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer	Alam 16.06.2026	1.) Name: Mita Sarker Designation: Senior Chemist	
2.) Name: Taslima Akhter Designation: Sample Analyzer	16.06.2026	2.) Name: Md. Biplab Hossain Designation: Chief Chemist	16/06/2026 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

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TRAINING & LAB SERVICES LTD.
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Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Groundwater Sample

Name of the Project	**: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)**
Name of the Client	**: L&T**
Description of sample	: Groundwater
Location	:Khulna & Sathkhira
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 16.05.2026-22.05.2026

LABORATORY TEST RESULTS

SN	Parameters	Unit	Analysis Method	Concentration						BD Standard ECR '2023	WHO Standard '2024
				GW-1	GW-2	GW-3	GW-4	GW-5	GW-6		
1	Total Coliform (TC)	CFU/100	MFM	0	0	0	0	0	0	0	NYS
2	Faecal Coliform (FC)	CFU/100	MFM	0	0	0	0	0	0	0	0

*NOTE: ECR =Environmental Conservation Rules, NYS =Not Yet Set, 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
24.05.2026	24.05.2026	24.05.2026

BANGLADESH ENVIRONMENTAL ENGINEERING
TRAINING & LAB SERVICES LTD.
Mamun Plaza (First Floor)31, Shahid Nazrul Islam sharak, Hatkhola, Tikatuli, Dhaka - 1203,
Bangladesh, Phone: +88-02-7175845, Mobile: +88 01713034889
Email: info.beetlsl@gmail.com

Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Groundwater Sample

Name of the Project	**: Design, Supply, Installation, Testing and Commissioning of 230 kV and 132kV Transmission Lines in Western Zone on Turnkey Basis (ADB Package-3)**
Name of the Client	**: L&T**
Description of sample	: Groundwater
Location	: Khulna & Sathkhira
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 16.05.2026-22.05.2026

LABORATORY TEST RESULTS

SN	Parameters	Unit	Analysis Method	Concentration						BD Standard ECR '2023	WHO Standard '2024
				GW-07	GW-11	GW-12	GW-13	GW-14	GW-15		
1	Total Coliform (TC)	CFU/100	MFM	0	0	0	0	0	0	0	NYS
2	Faecal Coliform (FC)	CFU/100	MFM	0	0	0	0	0	0	0	0

*NOTE: ECR =Environmental Conservation Rules, NYS =Not Yet Set, 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
24.05.2026	24.05.2026	24.05.2026

Government of the People's Republic of Bangladesh
Ministry of Agriculture
Soil Resource Development Institute
Divisional Laboratory, Dhaka
Krishi Khamar Sarak, Dhaka-1215

To
Mr. Nahid Hasan
L & T, Khulna
Envirocare International Ltd.
House#09 (3rd Floor), Road#06
Sector#12, Uttara, Dhaka-1230.

Analytical Result of Supplied Soil Samples

Sl. No.	Lab. No.	Semple ID		Name of the Element				
			pH	OC	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)
				(%)	Available	Total		
					(ppm)			
1.	11837	SQ-1	6.5	0.92	1.48	12.31	0.17	35.71
2.	11838	SQ-2	6.3	0.88	1.50	13.63	0.12	36.39
3.	11839	SQ-3	6.2	1.00	1.89	8.35	0.24	34.53
4.	11840	SQ-4	6.7	0.96	2.45	20.68	0.20	53.45
5.	11841	SQ-5	6.4	0.80	1.94	9.23	0.08	45.67
6.	11842	SQ-6	6.3	0.84	1.03	10.99	0.24	88.66
7.	11843	SQ-7	6.8	1.20	1.58	7.91	0.43	31.82
8.	11844	SQ-11	6.2	1.24	0.26	4.83	0.16	60.67
9.	11845	SQ-12	6.6	1.04	1.42	7.91	0.15	44.72
10.	11846	SQ-13	6.7	1.32	1.36	2.03	0.06	60.32
11.	11847	SQ-14	6.0	0.76	1.46	7.91	0.14	47.80
12.	11848	SQ-15	6.3	1.00	2.11	10.99	0.20	52.42

28.06.26
(Dr. Masuda Begum)
Senior Scientific Officer
Phone: 02-41025066.

Package 4

greenbud
Lets Grow Together Sustainable

Ambient Air Quality Test Report

Reference No			H/A 11998	Test Name	Ambient Air Quality
Sample Receiving Date	SL No	Type	Transmission Line	Sampling Date	Coordinates
	1	T-1/0 (Scope-F)	Bagerhat-Pirojpur-Bhandaria and Barishal-Bhandaria	17.06.2026	22°38'46.42"N 89°47'57.05"E
	2	T-1/0 (Scope-H)		18.06.2026	22°39'30.11"N 90°10'23.079"E
	3	T-2/4 (Scope-F)		19.06.2026	22°38'19.653"N 89°49'14.404"E
	4	T-21/5 (Scope-F)		20.06.2026	22°35'17.151"N 90°0'24.261"E
	5	T-T/1 (Scope-H)		21.06.2026	22°39'23.789"N 90°10'23.693"E
	6	T-1A/3 (Scope-E)	Purbasadirpur-Domar & Domar Hatibandha	07.06.2026	26°7'0.634"N 88°48'56.297"E
	7	T-3/3 (Scope-E)		08.06.2026	26°7'0.03"N 88°50'1.875"E
	8	T-4/0 (Scope-E)		09.06.2026	26° 7'4.599"N 88°50'38.757"E
	9	T-20/0 (Scope-A)		10.06.2026	26° 0'46.275"N 88°45'50.787"E
	10	T-21/3A (Scope-A)		11.06.2026	26° 1'40.291"N 88°46'10.805"E
	11	T-18/2	Niamatpur-Patnitala	12.06.2026	25°1'43.473"N 88°44'42.021"E
	12	T-18/3		13.06.2026	25°1'40.51"N 88°44'52.004"E
	13	T-19/0		14.06.2026	25°1'39.904"N 88°45'2.506"E
	14	T-19/1		15.06.2026	25°1'40.232"N 88°45'6.358"E
	15	T-T/2		16.06.2026	25°1'29.855"N 88°45'26.609"E
	16	T-AP2/0 (Scope-G)	Gopalganj-Shibchar & Madaripur-Faridpur	22.06.2026	23° 25'8.194"N 89°57'38.144"E
	17	T-13/0 (Scope-B)		23.06.2026	23°18'54.819"N 88°9'42.546"E
	18	T-14/0 (Scope-B)		24.06.2026	23° 18'54.457"N 90°9'57.612"E
	19	T-16/0 (Scope-B)		25.06.2026	23° 20'12.97"N 90°11'1.132"E
	20	T-AP1/0 (Scope-G)		26.06.2026	23°25'14.502"N 89°57'41.073"E
Date of Submission	28.06.2026				
Client Name	Transrail Lighting Ltd			Sample Type	Air quality Monitoring

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Table 1: Standard for Ambient Air Quality

Pollutant	Standard	Averaging Time
Carbon Monoxide (CO)	05 mg/m³	8 hours
	20 mg/m³	1 hour
Lead (Pb)	0.5 µg/m³	24 hours
	0.25 µg/m³	Annual
Nitrogen Dioxide (NO_2)	40 µg/m³	Annual
	80 µg/m³	24 hours
Particulate Matter (PM_{10})	50 µg/m³	Annual
	150 µg/m³	24 hours
Particulate Matter ($PM_{2.5}$)	35 µg/m³	Annual
	65 µg/m³	24 hours
Ozone (O_3)	180 µg/m³	1 hour
	100 µg/m³	8 hours
Sulfur Dioxide (SO_2)	250 µg/m³	1 hour
	80 µg/m³	24 hours
Ammonia (NH_3)	100 µg/m³	Annual
	400 µg/m³	24 hours

Source: Air Pollution Control Rules-2022, [Refer to Rule 3 Sub-rule (1) and Rule 5 Sub-rule (1), DoE]

Table 2: Ambient Air Quality Monitoring Result for Bagerhat-Pirojpur-Bhandaria and Barishal-Bhandaria Transmission Line

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters			
					SOx	NOx	CO	O_3
					µg/m³	µg/m³	mg/m³	µg/m³
17.06.2026	AAQ-1	T-1/0 (Scope-F)	22°38'46.42"N 89°47'57.05"E	8-hour	4.8	7.3	1.2	0
18.06.2026	AAQ-2	T-1/0 (Scope-H)	22°39'30.11"N 90°10'23.079"E	8-hour	5.0	7.8	1.2	0
19.06.2026	AAQ-3	T-2/4 (Scope-F)	22°38'19.653"N 89°49'14.404"E	8-hour	7.0	8.3	1.2	0
20.06.2026	AAQ-4	T-21/5 (Scope-F)	22°35'17.151"N 90°0'24.261"E	8-hour	4.7	7.1	1.6	4
21.06.2026	AAQ-5	T-T/1 (Scope-H)	22°39'23.789"N 90°10'23.693"E	8-hour	6.0	8.5	0.9	2
Air Pollution Control Rules-2022					**80**	**80**	**5**	**100**
Standard Time Period as per APCR-2022					**24hr.**	**24hr.**	**8hr.**	**8hr.**

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters				Remarks
					SPM	PM2.5	PM10	Pb	
					µg/m³	µg/m³	µg/m³	µg/m³	
17.06.2026	AAQ-1	T-1/0 (Scope-F)	22°38'46.42"N 89°47'57.05"E	24-hour	97.5	35	75	0	SPM is calculated from PM2.5 and PM10
18.06.2026	AAQ-2	T-1/0 (Scope-H)	22°39'30.11"N 90°10'23.079"E		105.3	35	81	0.003	
19.06.2026	AAQ-3	T-2/4 (Scope-F)	22°38'19.653"N 89°49'14.404"E		87.1	36	67	0	
20.06.2026	AAQ-4	T-21/5 (Scope-F)	22°35'17.151"N 90°0'24.261"E		110.5	47	85	0.002	
21.06.2026	AAQ-5	T-T/1 (Scope-H)	22°39'23.789"N 90°10'23.693"E		80.6	44	62	0.002	
Air Pollution Control Rules-2022					**NYS**	**65**	**150**	**0.5**	

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Standard Time Period as per APCR-2022	**NYS**	**24hr.**	**24hr.**	**24hr.**	

Table 3: Ambient Air Quality Monitoring Result for Purbasadirpur-Domar & Domar Hatibandha Transmission Line

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters			
					SOx	NOx	CO	O_3
					µg/m³	µg/m³	mg/m³	µg/m³
07.06.2026	AAQ-1	T-1A/3 (Scope-E)	26°7'0.634"N 88°48'56.297"E	8-hour	8.7	9.9	1.3	0
08.06.2026	AAQ-2	T-3/3 (Scope-E)	26°7'0.03"N 88°50'1.875"E	8-hour	4.5	14.0	0.0	5
09.06.2026	AAQ-3	T-4/0 (Scope-E)	26° 7'4.599"N 88°50'38.757"E	8-hour	11.3	12.8	1.3	0
10.06.2026	AAQ-4	T-20/0 (Scope-A)	26° 0'46.275"N 88°45'50.787"E	8-hour	12.3	14.0	2.9	3
11.06.2026	AAQ-5	T-21/3A (Scope-A)	26° 1'40.291"N 88°46'10.805"E	8-hour	8.3	7.7	1.5	5
Air Pollution Control Rules-2022					**80**	**80**	**5**	**100**
Standard Time Period as per APCR-2022					**24hr.**	**24hr.**	**8hr.**	**8hr.**

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters				Remarks
					SPM	PM2.5	PM10	Pb	
					µg/m³	µg/m³	µg/m³	µg/m³	
07.06.2026	AAQ-1	T-1A/3 (Scope-E)	26°7'0.634"N 88°48'56.297"E	24-hour	80.6	43	62	0.001	SPM is calculated from PM2.5 and PM10
08.06.2026	AAQ-2	T-3/3 (Scope-E)	26°7'0.03"N 88°50'1.875"E		84.5	44	65	0	
09.06.2026	AAQ-3	T-4/0 (Scope-E)	26° 7'4.599"N 88°50'38.757"E		96.2	39	74	0	
10.06.2026	AAQ-4	T-20/0 (Scope- A)	26° 0'46.275"N 88°45'50.787"E		84.5	42	65	0.001	
11.06.2026	AAQ-5	T-21/3A (Scope-A)	26° 1'40.291"N 88°46'10.805"E		91.0	42	70	0.002	
Air Pollution Control Rules-2022					**NYS**	**65**	**150**	**0.5**	
Standard Time Period as per APCR-2022					**NYS**	**24hr.**	**24hr.**	**24hr.**	

Table 4: Ambient Air Quality Monitoring Result Niamatpur-Patnitala Transmission Line

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters			
					SOx	NOx	CO	O_3
					µg/m³	µg/m³	mg/m³	µg/m³
12.06.2026	AAQ-1	T-18/2	25°1'43.473"N 88°44'42.021"E	8-hour	5.9	7.7	2.1	0
13.06.2026	AAQ-2	T-18/3	25°1'40.51"N 88°44'52.004"E	8-hour	8.1	7.5	1.8	3
14.06.2026	AAQ-3	T-19/0	25°1'39.904"N 88°45'2.506"E	8-hour	9.2	10.8	0.0	2
15.06.2026	AAQ-4	T-19/1	25°1'40.232"N 88°45'6.358"E	8-hour	8.5	7.7	0.0	3
16.06.2026	AAQ-5	T-T/2	25°1'29.855"N 88°45'26.609"E	8-hour	7.3	11.9	2.0	0
Air Pollution Control Rules-2022					**80**	**80**	**5**	**100**
Standard Time Period as per APCR-2022					**24hr.**	**24hr.**	**8hr.**	**8hr.**

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Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters				Remarks
					SPM	PM2.5	PM10	Pb	
					µg/m³	µg/m³	µg/m³	µg/m³	
12.06.2026	AAQ-1	T-18/2	25°1'43.473"N 88°44'42.021"E	24-hour	100.1	33	77	0.001	SPM is calculated from PM2.5 and PM10
13.06.2026	AAQ-2	T-18/3	25°1'40.51"N 88°44'52.004"E		101.4	44	78	0.002	
14.06.2026	AAQ-3	T-19/0	25°1'39.904"N 88°45'2.506"E		87.1	32	67	0.004	
15.06.2026	AAQ-4	T-19/1	25°1'40.232"N 88°45'6.358"E		105.3	42	81	0	
16.06.2026	AAQ-5	T-T/2	25°1'29.855"N 88°45'26.609"E		79.3	37	61	0	
Air Pollution Control Rules-2022					**NYS**	**65**	**150**	**0.5**	
Standard Time Period as per APCR-2022					**NYS**	**24hr.**	**24hr.**	**24hr.**	

Table 5: Ambient Air Quality Monitoring Result Gopalganj-Shibchar & Madaripur-Faridpur Transmission Line

Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters			
					SOx	NOx	CO	O_3
					µg/m³	µg/m³	mg/m³	µg/m³
22.06.2026	AAQ-1	T-AP2/0 (Scope-G)	23° 25'8.194"N 89°57'38.144"E	8-hour	10.8	8.2	2.6	0
23.06.2026	AAQ-2	T-13/0 (Scope-B)	23°18'54.819"N 88°9'42.546"E	8-hour	8.8	13.4	0.3	1
24.06.2026	AAQ-3	T-14/0 (Scope-B)	23° 18'54.457"N 90°9'57.612"E	8-hour	5.3	13.9	0.0	1
25.06.2026	AAQ-4	T-16/0 (Scope-B)	23° 20'12.97"N 90°11'1.132"E	8-hour	10.5	9.7	1.7	0
26.06.2026	AAQ-5	T-AP1/0 (Scope-G)	23°25'14.502"N 89°57'41.073"E	8-hour	5.0	14.8	1.3	0
Air Pollution Control Rules-2022					**80**	**80**	**5**	**100**
Standard Time Period as per APCR-2022					**24hr.**	**24hr.**	**8hr.**	**8hr.**

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Date	Sl. No.	Transmission Line	Co-ordinates	Period	Parameters				Remarks
					SPM	PM2.5	PM10	Pb	
					µg/m³	µg/m³	µg/m³	µg/m³	
22.06.2026	AAQ-1	T-AP2/0 (Scope-G)	23° 25'8.194"N 89°57'38.144"E	24-hour	97.5	33	75	0.002	SPM is calculated from PM2.5 and PM10
23.06.2026	AAQ-2	T-13/0 (Scope-B)	23°18'54.819"N 88°9'42.546"E		105.3	37	81	0.001	
24.06.2026	AAQ-3	T-14/0 (Scope-B)	23° 18'54.457"N 90°9'57.612"E		92.3	44	71	0.002	
25.06.2026	AAQ-4	T-16/0 (Scope-B)	23° 20'12.97"N 90°11'1.132"E		85.8	32	66	0.002	
26.06.2026	AAQ-5	T-AP1/0 (Scope-G)	23°25'14.502"N 89°57'41.073"E		105.3	40	81	0.003	
Air Pollution Control Rules-2022					**NYS**	**65**	**150**	**0.5**	
Standard Time Period as per APCR-2022					**NYS**	**24hr.**	**24hr.**	**24hr.**	

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Ambient Noise Level Test Report

Reference No		I/N 11618		Test Name	Ambient Noise Level
Sample Receiving Date	SL No	Type	Transmission Line	Sampling Date	Coordinates
	1	T-1/0 (Scope-F)	Bagerhat-Pirojpur-Bhandaria and Barishal-Bhandaria	17.06.2026	22°38'46.42"N 89°47'57.05"E
	2	T-1/0 (Scope-H)		18.06.2026	22°39'30.11"N 90°10'23.079"E
	3	T-2/4 (Scope-F)		19.06.2026	22°38'19.653"N 89°49'14.404"E
	4	T-21/5 (Scope-F)		20.06.2026	22°35'17.151"N 90°0'24.261"E
	5	T-T/1 (Scope-H)		21.06.2026	22°39'23.789"N 90°10'23.693"E
	6	T-1A/3 (Scope-E)	Purbasadirpur-Domar & Domar Hatibandha	07.06.2026	26°70.634"N 88°48'56.297"E
	7	T-3/3 (Scope-E)		08.06.2026	26°70.03"N 88°50'1.875"E
	8	T-4/0 (Scope-E)		09.06.2026	26° 7'4.599"N 88°50'38.757"E
	9	T-20/0 (Scope-A)		10.06.2026	26° 0'46.275"N 88°45'50.787"E
	10	T-21/3A (Scope-A)		11.06.2026	26° 1'40.291"N 88°46'10.805"E
	11	T-18/2	Niamatpur-Patnitala	12.06.2026	25°1'43.473"N 88°44'42.021"E
	12	T-18/3		13.06.2026	25°1'40.51"N 88°44'52.004"E
	13	T-19/0		14.06.2026	25°1'39.904"N 88°45'2.506"E
	14	T-19/1		15.06.2026	25°1'40.232"N 88°45'6.358"E
	15	T-T/2		16.06.2026	25°1'29.855"N 88°45'26.609"E
	16	T-AP2/0 (Scope-G)	Gopalganj-Shibchar & Madaripur-Faridpur	22.06.2026	23° 25'8.194"N 89°57'38.144"E
	17	T-13/0 (Scope-B)		23.06.2026	23°18'54.819"N 88°9'42.546"E
	18	T-14/0 (Scope-B)		24.06.2026	23° 18'54.457"N 90°9'57.612"E
	19	T-16/0 (Scope-B)		25.06.2026	23° 20'12.97"N 90°11'1.132"E
	20	T-AP1/0 (Scope-G)		26.06.2026	23°25'14.502"N 89°57'41.073"E
Date of Submission	28.06.2026				
Client Name	Transrail Lighting Ltd			Sample Type	Noise level Monitoring

Table 1: Standard for Ambient Noise Level

Standard	Zone	Day time – dB	Night time-dB
IFC/World Bank Group EHS Guideline, 2007	Residential, Institutional, Educational	55	45
	Industrial, commercial	70	70
Sound Pollution Control Rules-2025	Mixed area	60	50
	Commercial	70	60
	Industrial	75	70

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Table 2: Ambient Noise Level Monitoring Result for Bagerhat-Pirojpur-Bhandaria and Barishal-Bhandaria Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
17.06.2026	ANL-01	Mixed area	53.4	37.76	60	50
18.06.2026	ANL-02	Mixed area	54.4	43.87	60	50
19.06.2026	ANL-03	Mixed area	50.0	40.57	60	50
20.06.2026	ANL-04	Mixed area	55.8	40.84	60	50
21.06.2026	ANL-05	Mixed area	49.3	38.75	60	50

Table 3: Ambient Noise Level Monitoring Result for Purbasadirpur-Domar & Domar Hatibandha Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
07.06.2026	ANL-01	Mixed area	56.2	38.33	60	50
08.06.2026	ANL-02	Mixed area	52.6	43.31	60	50
09.06.2026	ANL-03	Mixed area	51.6	38.15	60	50
10.06.2026	ANL-04	Mixed area	53.8	40.46	60	50
11.06.2026	ANL-05	Mixed area	52.4	43.29	60	50

Table 4: Ambient Noise Level Monitoring Result for Niamatpur-Patnitala Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
12.06.2026	ANL-01	Mixed area	55.9	37.04	60	50
13.06.2026	ANL-02	Mixed area	54.2	37.93	60	50
14.06.2026	ANL-03	Mixed area	53.1	41.12	60	50
15.06.2026	ANL-04	Mixed area	55.7	44.91	60	50
16.06.2026	ANL-05	Mixed area	56.8	43.79	60	50

Table 5: Ambient Noise Level Monitoring Result for Gopalganj-Shibchar & Madaripur-Faridpur Transmission Line

Date	S/N	Category	Monitoring result		Standard Limit	
			Leq (Day)	Leq (Night)	Day	Night
22.06.2026	ANL-01	Mixed area	54.8	39.65	60	50
23.06.2026	ANL-02	Mixed area	57.4	39.46	60	50
24.06.2026	ANL-03	Mixed area	55.6	44.23	60	50
25.06.2026	ANL-04	Mixed area	50.5	39.67	60	50
26.06.2026	ANL-05	Mixed area	56.6	42.06	60	50

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Surface Water Quality Analysis Summary Report

Sample ID (For Collection)	SW - 10530	**Test Name**	Surface Water Test
Sample Type	Surface Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	22°38'46.42"N 89°47'57.05"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-1/0) (Scope F & H)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	mg/L	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	≥5	Titrimetric
7	pH	%	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	*NYS*	Gravimetric Method
10	Turbidity	NTU	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	*NYS*	5520.B

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Test Results

S/l	Water Quality Parameters	Unit	Result	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	44	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	6.0	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	1.60	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	<0.1	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	$\mu S/cm$	40	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	4.20	≥5	Titrimetric
7	pH	%	7.3	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	170	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	2	*NYS*	Gravimetric Method
10	Turbidity	NTU	3.98	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	<2.0	*NYS*	5520.B

Comments:

1. **All of the parameters are within the acceptable limit set for the Inland Surface Water in ECR 2023 Except for BOD_5.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure

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Annexure - A

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Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052756 (V1) Receipt No: SRA26052400394 Date of Reporting: 04.06.2026

Particular of Sample: Water Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) SW-3, Bagerhat, Pirojpur, Barishal, Bhandaria (T-1/0).

Sl. No.	Water Quality Parameters	Unit	Results	Method
1	Total coliforms	CFU /100mL	44	Membrane Filtration
2	Biochemical Oxygen Demand (BOD_5 ; 20°C)	mg/L	6.0	5-Day BOD Test
3	Total Nitrogen (TN)	mg/L	1.60	Persulfate Method
4	Ammonia as Nitrogen	mg/L	<0.1	Photometric

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

Page 1 of 1

Surface Water Test Report of from ***icddr,b***

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Annexure - B

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Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/3,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060126	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nil & Dated: 24-05-2026	Sample Source: Surface Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Bagerhat, Upa:
Care Taker: Transrail Lighting Limited.(S : SW-3)	Union:, Vill.:Tower ID: T-1/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Chemical Oxygen Demand (COD)	4.0	40	mg/L	CRM	-
2	Dissolved Oxygen (DO)	6.0	4.20	mg/L	Multimeter	-
3	pH	6.5-8.5	7.3	-	pH Meter	-
4	Total Dissolved Solid (TDS)	1000	170	mg/L	Multimeter	-
5	Total Suspended Solid (TSS)	10	2	mg/L	Gravimetric Method	-
6	Turbidity	10	3.98	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: Signature
1.) Name: S.M. Parves Talukder — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by: Signature
1.) Name: Mita Sarker — 17.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

Page 1 of 1

Surface Water Test Report of from ***DPHE***

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Annexure – C

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-99 of Analytical Service Cell
BCSIR, 02/06/2026
Lab/Sample ID : A-653-656
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Surface Water (sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-653	Surface Water, **(SW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Oil & Grease	< 2.0 mg/L	5520.B
A-654	Surface Water, **(SW-02)** Tower ID: T-19/0, Scope D: Niyamatpur- Patnitola	Oil & Grease	< 2.0 mg/L	5520.B
A-655	Surface Water, **(SW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat-Pirojpur-Barishal, Bhandaria	Oil & Grease	< 2.0 mg/L	5520.B
A-656	Surface Water, **(SW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Oil & Grease	< 2.0 mg/L	5520.B

05/07/2026
Analyst
Md Tanzil Ahamed Shawon
Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05.07.2026
Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
BCSIR Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

Page 1 of 1

Note:
a. The results reported here are based only on the supplied samples in this laboratory.
b. Any complain about test report will not be acceptable after one month from the date of issuing of the said report.
c. This report/result shall not be reproduced/published without prior approval of the authority.

Analytical Service Cell
Dr. Qudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh
Telephone: 9671108, Fax: 88-02-9671108 E-mail:asc@bcsir.gov.bd Wedsite: www.bcsir.gov.bd

*Surface Water Test Report of from **INARS***

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Surface Water Quality Analysis Summary Report

Sample ID (For Collection)	SW - 10529	**Test Name**	Surface Water Test
Sample Type	Surface Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	25°1'39.904"N 88°45'2.506"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-19/0) (Scope D)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	mg/L	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	≥5	Titrimetric
7	pH	%	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	*NYS*	Gravimetric Method
10	Turbidity	NTU	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	*NYS*	5520.B

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Test Results

S/l	Water Quality Parameters	Unit	Result	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	28	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	9.3	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	2.80	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	<0.1	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	$\mu S/cm$	36	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	4.60	≥5	Titrimetric
7	pH	%	7.3	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	140	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	28	*NYS*	Gravimetric Method
10	Turbidity	NTU	26.2	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	<2.0	*NYS*	5520.B

Comments:

1. **All of the parameters are within the acceptable limit set for the Inland Surface Water in ECR 2023 Except for BOD_5.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure

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Annexure - A

icddr,b
Health Systems and Population Studies Division
Mohakhali, Dhaka - 1212
Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org
Laboratory of Environmental Health

Test Report
Receipt No: SRA26052400393

Lab. ID No. 2026052757 (V1)
Date of Reporting: 04.06.2026
Particular of Sample: Water
Date of Sample Received: 24.05.2026
Client Address: Transrail lighting Limited (G-479) SW-2, Niyamatpur, Patnitola, Naogaon (T-19/0).

Sl. No.	Water Quality Parameters	Unit	Results	Method
1	Total coliforms	CFU /100mL	28	Membrane Filtration
2	Biochemical Oxygen Demand (BOD_5; 20^0C)	mg/L	9.3	5-Day BOD Test
3	Total Nitrogen (TN)	mg/L	2.80	Persulfate Method
4	Ammonia as Nitrogen	mg/L	<0.1	Photometric

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b
Page 1 of 1

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016
Checked By :
End of the Report

Surface Water Test Report of from ***icddr,b***

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Annexure - B

Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/2,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060125	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Surface Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Naogaon, Upa:
Care Taker: Transrail Lighting Limited.(S : SW-2)	Union:, Vill.:Tower ID: T-19/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Chemical Oxygen Demand (COD)	4.0	36	mg/L	CRM	-
2	Dissolved Oxygen (DO)	6.0	4.60	mg/L	Multimeter	-
3	pH	6.5-8.5	7.3	-	pH Meter	-
4	Total Dissolved Solid (TDS)	1000	140	mg/L	Multimeter	-
5	Total Suspended Solid (TSS)	10	28	mg/L	Gravimetric Method	-
6	Turbidity	10	26.2	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:
1.) Name: S.M. Parves Talukder — Signature — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by:
1.) Name: Mita Sarker — Signature — 17.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

Page 1 of 1

Surface Water Test Report of from ***DPHE***

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Annexure – C

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-99 of Analytical Service Cell BCSIR, 02/06/2026
Lab/Sample ID : A-653-656
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Surface Water (sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-653	Surface Water, **(SW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Oil & Grease	< 2.0 mg/L	5520.B
A-654	Surface Water, **(SW-02)** Tower ID: T-19/0, Scope D: Niyamatpur- Patnitola	Oil & Grease	< 2.0 mg/L	5520.B
A-655	Surface Water, **(SW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat-Pirojpur-Barishal, Bhandaria	Oil & Grease	< 2.0 mg/L	5520.B
A-656	Surface Water, **(SW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Oil & Grease	< 2.0 mg/L	5520.B

Analyst
Md. Tanzil Ahamed Shawon
Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05-07-2026
Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
BCSIR, Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

Page 1 of 1

Note:
a. The results reported here are based only on the supplied samples in this laboratory.
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Dr. Qudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh
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Surface Water Quality Analysis Summary Report

Sample ID (For Collection)	SW - 10528	**Test Name**	Surface Water Test
Sample Type	Surface Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	26°1'40.291"N 88°46'10.805"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-21/3) (Scope A & E)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	mg/L	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	≥5	Titrimetric
7	pH	%	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	*NYS*	Gravimetric Method
10	Turbidity	NTU	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	*NYS*	5520.B

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Test Results

S/l	Water Quality Parameters	Unit	Result	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	0	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	7.30	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	2.40	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	<0.1	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	$\mu S/cm$	28	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	4.70	≥5	Titrimetric
7	pH	%	7.2	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	100	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	40	*NYS*	Gravimetric Method
10	Turbidity	NTU	6.94	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	<2.0	*NYS*	5520.B

Comments:

1. **All of the parameters are within the acceptable limit set for the Inland Surface Water in ECR 2023 Except for BOD_5.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure

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Annexure - A

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Health Systems and Population Studies Division
Mohakhali, Dhaka - 1212
Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org
Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052758 (V1) Receipt No: SRA26052400392 Date of Reporting: 04.06.2026

Particular of Sample: Water Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) SW-1, Purbasadirpur, Domar, Hatibandha (T-21/3).

Sl. No.	Water Quality Parameters	Unit	Results	Method
1	Total coliforms	CFU /100mL	0	Membrane Filtration
2	Biochemical Oxygen Demand (BOD_5 ; 20°C)	mg/L	7.30	5-Day BOD Test
3	Total Nitrogen (TN)	mg/L	2.40	Persulfate Method
4	Ammonia as Nitrogen	mg/L	<0.1	Photometric

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

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Surface Water Test Report of from ***icddr,b***

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Annexure - B

Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/1,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060124	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Surface Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Nilphamari, Upa:
Care Taker: Transrail Lighting Limited.(S : SW-1)	Union:, Vill.:Tower ID: T-21/3
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Chemical Oxygen Demand (COD)	4.0	28	mg/L	CRM	-
2	Dissolved Oxygen (DO)	6.0	4.70	mg/L	Multimeter	-
3	pH	6.5-8.5	7.2	-	pH Meter	-
4	Total Dissolved Solid (TDS)	1000	100	mg/L	Multimeter	-
5	Total Suspended Solic (TSS)	10	40	mg/L	Gravimetric Method	-
6	Turbidity	10	6.94	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:
1.) Name: S.M. Parves Talukder — Signature — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by:
1.) Name: Mita Sarker — Signature — 17.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Surface Water Test Report of from ***DPHE***

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Annexure – C

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-99 of Analytical Service Cell
BCSIR, 02/06/2026
Lab/Sample ID : A-653-656
Client's Details : **Transrail Lighting Limited**
Project Code-G-479
Sample Description : Request for Testing of Surface Water (sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-653	Surface Water, **(SW-01)** Tower ID: T-21/3, Scope A & E: Purbasadipur-Domar-Hatibandha	Oil & Grease	< 2.0 mg/L	5520.B
A-654	Surface Water, **(SW-02)** Tower ID: T-19/0, Scope D: Niyamatpur- Patnitola	Oil & Grease	< 2.0 mg/L	5520.B
A-655	Surface Water, **(SW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat-Pirojpur-Barishal, Bhandaria	Oil & Grease	< 2.0 mg/L	5520.B
A-656	Surface Water, **(SW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Oil & Grease	< 2.0 mg/L	5520.B

05/07/2026
Analyst
Md. Tanvir Ahamed Bhuiyan
Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05-07-2026
Supervisor
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Senior Scientific Officer
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05/07/26
Director
Dr. Md. Salim Khan
Director (Additional Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205

Page 1 of 1

Note:
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b. Any complaint about test report will not be acceptable after one month from the date of issuing of the said report.
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Surface Water Quality Analysis Summary Report

Sample ID (For Collection)	SW - 10531	**Test Name**	Surface Water Test
Sample Type	Surface Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	23°25'14.502"N 89°57'41.073"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-AP1/0) (Scope B & G)		

Methodology

S/I	Water Quality Parameters	Unit	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	≤5000	5-day BOD Test
2	Biochemical Oxygen Deman (BOD_5)	mg/L	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	mg/L	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	≥5	Titrimetric
7	pH	%	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	*NYS*	Gravimetric Method
10	Turbidity	NTU	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	*NYS*	5520.B

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Test Results

S/l	Water Quality Parameters	Unit	Result	Bangladesh Standard, ECR'2023 1(4)	Method of Analysis
1	Total Coliforms	CFU/100 mL	62	≤5000	5-day BOD Test
2	Biochemical Oxygen Demand (BOD_5)	mg/L	6.50	≤6	Photometric
3	Total Nitrogen (TN)	mg/L	1.50	*NYS*	CRM
4	Ammonia as Nitrogen	mg/L	<0.1	0.3	Multimeter
5	Chemical Oxygen Deman (COD)	$\mu S/cm$	44	50	Multimeter
6	Dissolved Oxygen (DO)	mg/L	4.15	≥5	Titrimetric
7	pH	%	7.5	6-9	Multimeter
8	Total Dissolved Solid (TDS)	mg/L	136	1000	Multimeter
9	Total Suspended Solid (TSS)	mg/L	10	*NYS*	Gravimetric Method
10	Turbidity	NTU	6.44	*NYS*	Turbidity Meter
11	Oil & Grease	mg/L	<2.0	*NYS*	5520.B

Comments:

1. **All of the parameters are within the acceptable limit set for the Inland Surface Water in ECR 2023 Except for BOD_5.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure

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Annexure - A

icddr,b

Health Systems and Population Studies Division
Mohakhali, Dhaka - 1212
Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org

Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052755 (V1) Receipt No: SRA26052400395 Date of Reporting: 04.06.2026

Particular of Sample: Water Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) SW-4, Gopalganj, Shibchar, Madaripur, Faridpar (T-AP1/0).

Sl. No.	Water Quality Parameters	Unit	Results	Method
1	Total coliforms	CFU /100mL	62	Membrane Filtration
2	Biochemical Oxygen Demand (BOD$_5$; 20^{0}C)	mg/L	6.50	5-Day BOD Test
3	Total Nitrogen (TN)	mg/L	1.50	Persulfate Method
4	Ammonia as Nitrogen	mg/L	<0.1	Photometric

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

Page 1 of 1

Surface Water Test Report of from ***icddr,b***

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Annexure - B

Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9862003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/4,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060127	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Surface Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Gopalganj, Upa:
Care Taker: Transrail Lighting Limited.(S : SW-4)	Union:, Vill.:Tower ID: T-AP1/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Chemical Oxygen Demand (COD)	4.0	44	mg/L	CRM	-
2	Dissolved Oxygen (DO)	6.0	4.15	mg/L	Multimeter	-
3	pH	6.5-8.5	7.5	-	pH Meter	-
4	Total Dissolved Solid (TDS)	1000	136	mg/L	Multimeter	-
5	Total Suspended Solid (TSS)	10	10	mg/L	Gravimetric Method	-
6	Turbidity	10	6.44	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: Signature
1.) Name: S.M. Parves Talukder — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by: Signature
1.) Name: Mita Sarker — 17.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Surface Water Test Report of from ***DPHE***

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Annexure – C

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-99 of Analytical Service Cell
BCSIR, 02/06/2026
Lab/Sample ID : A-653-656
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Surface Water (sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-653	Surface Water, **(SW-01)** Tower ID: T-21/3, Scope A & E: Purbosadirpur-Domar-Hatibandha	Oil & Grease	< 2.0 mg/L	5520 B
A-654	Surface Water, **(SW-02)** Tower ID: T-19/0, Scope D: Niyamatpur- Patnitola	Oil & Grease	< 2.0 mg/L	5520 B
A-655	Surface Water, **(SW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat-Pirojpur-Barishal, Bhandaria	Oil & Grease	< 2.0 mg/L	5520 B
A-656	Surface Water, **(SW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Oil & Grease	< 2.0 mg/L	5520 B

Analyst
Md. Tanzil Ahmed Shawon
Scientific Officer
BCSIR, Dhanmondi, Dhaka-1205

Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
BCSIR Dhanmondi, Dhaka-1205

Director
Dr. Md. Salim Khan
Director (Additional Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205

Page 1 of 1

Note:
a. The results reported here are based only on the supplied samples in this laboratory.
b. Any complain about test report will not be acceptable after one month from the date of issuing of the said report.
c. This report/result shall not be reproduced/published without prior approval of the authority.

Analytical Service Cell
Dr. Qudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh.
Telephone: 9671108, Fax: 88-02-9671108 E-mail:asc@bcsir.gov.bd Website: www.bcsir.gov.bd

Surface Water Test Report of from ***INARS***

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
কৃষি মন্ত্রণালয়
মৃত্তিকা সম্পদ উন্নয়ন ইনস্টিটিউট
কেন্দ্রীয় গবেষণাগার, মৃত্তিকা ভবন
কৃষি খামার সড়ক, ঢাকা-১২১৫।
www.srdi.gov.bd

স্মারক নং-১২.০৩.০০০০.০৩৪.৫৭.০০৫.২৫-৫০৩ তারিখঃ ২৪/০৮/২০২৬ খ্রি.।

প্রাপকঃ

Transrail Lighting Limited
Project Code- G 479.

বিষয়ঃ **চার (০৪) টি মৃত্তিকা নমুনার বিশ্লেষিত ফলাফল প্রেরণ।**

সূত্র: আপনার ১৪/০৬/২০২৬ খ্রি. তারিখের আবেদন।

উপর্যুক্ত বিষয় ও সূত্রেয় পত্রের প্রেক্ষিতে সদয় অবগতির জন্য জানানো যাচ্ছে যে, আপনার প্রেরিত মোট চার (০৪) টি মৃত্তিকা নমুনার বিশ্লেষিত ফলাফল এতদসংগে প্রেরণ করা হলো।

সংযুক্তঃ ফলাফল- এক (০১) পাতা।

২৪/০৮/২৬
(মোঃ জয়নাল আবেদিন)
পরিচালক
অ্যানালাইটিকেল সার্ভিসেস উইং
মৃত্তিকা সম্পদ উন্নয়ন ইনস্টিটিউট
মৃত্তিকা ভবন, ঢাকা-১২১৫।

অনুলিপিঃ
১। অফিস কপি।

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TEST REPORT

The People's Republic of Bangladesh
Soil Resource Development Institute (SRDI)
Central Laboratory
Mrittika Bhabon, Krishi Khamar Sarak, Dhaka-1215

Report ID	:	**12.03.0000.034.57.005.25-503**	Ref. F01(7.8/01)
Name of Client	:	**Transrail Lighting Limited**	
Address	:	Project Code- G 479.	
Mobile & E-mail	:	-------	
Description with Ref.	:	Office Reff; 14th June, 2026	
Sampling Method	:	Not Applicable	
Sample Received Date	:	14th June, 2026	
Test Starting Date	:	02th August, 2026	
Result Delivery date	:	24th August, 2026	
Testing Method	:	pH (1:2.5 Glass Electrode Method), OC (Wet Oxidation Method), Cd, Cu, Pb & Cr (Atomic Absorption Spectrophotometric Method).	
Test Temperature	:	Average 23.3^0 C	
Billing Information	:	8680 Tk is Paid in Book No. 173 And Received No. 17298	

Analytical Results

Lab No.	Sample Name & Code	Tested Items			Remarks
		Element	Result	Unit	
S2026-544	Soil -01	pH	6.00	-	-
		Organic Carbon (OC)	1.49	%	
		Copper (Cu)	1.57	ppm	
		Cadmium (Cd)	3.51	ppm	
		Lead (Pb)	0.00	ppm	
		Chromium (Cr)	91.32	ppm	
S2026-545	Soil -02	pH	7.00	-	-
		Organic Carbon (OC)	0.16	%	
		Copper (Cu)	2.60	ppm	
		Cadmium (Cd)	3.89	ppm	
		Lead (Pb)	0.00	ppm	
		Chromium (Cr)	91.32	ppm	
S2026-546	Soil -03	pH	7.00	-	-
		Organic Carbon (OC)	1.06	%	
		Copper (Cu)	2.76	ppm	
		Cadmium (Cd)	3.91	ppm	
		Lead (Pb)	0.00	ppm	
		Chromium (Cr)	105.61	ppm	
S2026-547	Soil -04	pH	7.60	-	-
		Organic Carbon (OC)	0.55	%	
		Copper (Cu)	1.82	ppm	
		Cadmium (Cd)	3.89	ppm	
		Lead (Pb)	3.73	ppm	
		Chromium (Cr)	104.66	ppm	

24.08.2026
(Asst. Technical Manager)
মোঃ আরিফুল আলম তরফ
বৈজ্ঞানিক কর্মকর্তা
কেন্দ্রীয় গবেষণাগার
মৃত্তিকা সম্পদ উন্নয়ন ইনস্টিটিউট
খামারবাড়ি সড়ক, ঢাকা-১২১৫

24.08.2026
(Technical Manager)
ড. মোসাম্মৎ সালমা জান্নাত
উর্ধ্বতন বৈজ্ঞানিক কর্মকর্তা
কেন্দ্রীয় গবেষণাগার
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গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

24.8.26
(Quality Manager)
ড. মোঃ নূরুল হুদা আল মামুন
উর্ধ্বতন বৈজ্ঞানিক কর্মকর্তা
মৃত্তিকা সম্পদ উন্নয়ন ইনস্টিটিউট
সয়েল কেমিস্ট্রি শাখা
কেন্দ্রীয় গবেষণাগার, ঢাকা
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Ground Water Quality Analysis Summary Report

Sample ID (For Collection)	GW - 10526	**Test Name**	Ground Water Test
Sample Type	Ground Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	22°38'46.42"N 89°47'57.05"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-1/0) (Scope F & H)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.05	AAS
2	Chloride	mg/L	250	Titrimetric
3	EC	$\mu S/cm$	-	Multimeter
4	Hardness	mg/L	500	Titrimetric
5	Iron (Fe)	mg/L	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.4	AAS
7	pH	-	6.5-8.5	pH Meter
8	Salinity	%	-	Multimeter
9	Temperature	ºC	20-30	Thermometer
10	Turbidity	NTU	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	-	GC (In house)

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Test Results

S/l	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.001	0.05	AAS
2	Chloride	mg/L	20	250	Titrimetric
3	EC	$\mu S/cm$	780	-	Multimeter
4	Hardness	mg/L	50	500	Titrimetric
5	Iron (Fe)	mg/L	0.14	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.25	0.1	AAS
7	pH	-	8.1	6.5-8.5	pH Meter
8	Salinity	%	0.39	-	Multimeter
9	Temperature	ºC	25.9	20-30	Thermometer
10	Turbidity	NTU	0.52	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	Not detectable	-	GC (In house)

Comments:

1. **All the parameters are within the acceptable limits set for the Drinking Water in ECR 2023 except for DO & COD.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure.

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Annexure - A

Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/7,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060130	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Ground Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Bagerhat, Upa:
Care Taker: Transrail Lighting Limited.(S : GW-3)	Union:, Vill.:Tower ID: T-1/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	20	mg/L	Titrimetic	-
3	EC	-	780	µS/cm	Multimeter	-
4	Hardness	200-500	50	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.14	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.25	mg/L	AAS	0.03
7	pH	6.5-8.5	8.1	-	pH Meter	-
8	Salinity	-	0.39	%	Multimeter	-
9	Temperature	20-30	25.9	°C	Thermometer	-
10	Turbidity	10	0.52	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by:
1.) Name: S.M. Parves Talukder — Signature — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by:
1.) Name: Mita Sarker — Signature — 12.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Ground Water Test Report of from DPHE

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Annexure - B

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

জীবনের জন্য বিজ্ঞান

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-98 of Analytical Service Cell, BCSIR, 02/06/2026
Lab/Sample ID : A-649-652
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Ground Water (Sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-649	Ground Water, **(GW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-650	Ground Water, **(GW-02)** Tower ID: T-19/0, Scope D: Niyamatpur-Patnitola	Total Petroleum Hydrocarbons (TPH)	0.13 mg/L	GC (In house)
A-651	Ground Water, **(GW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat Pirojpur-Barishal, Bhandaria	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-652	Ground Water, **(GW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Total Petroleum Hydrocarbons (TPH)	0.07 mg/L	GC (In house)

05.07.26
Analyst
Mehedi Hasan
Scientific Officer
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205

05.07.2026
Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

Page 1 of 1

Note:
a. The results reported here are based only on the supplied samples in this laboratory.
b. Any complain about test report will not be acceptable after one month from the date of issuing of the said report.
c. This report/result shall not be reproduced/published without prior approval of the authority.

Analytical Service Cell
Dr. Qudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh
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*Ground Water Test Report of from **INARS***

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Annexure - C

icddr,b
Health Systems and Population Studies Division
Mohakhali, Dhaka - 1212
Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org
Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052752 (V1) Receipt No: SRA26052400407 Date of Reporting: 03.06.2026

Particular of Sample: Drinking Water (GW) Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) GW-3, Bagerhat, Pirojpur, Barishal, Bhandaria (T-1/0).

Sl. No.	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'23)	WHO Guideline for Drinking Water, 2022	Method
1	Total coliforms	CFU/100mL	0	0	0	Membrane Filtration
2	Faecal coliforms	CFU/100mL	0	0	0	Membrane Filtration

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

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Ground Water Test Report of from icddr,b

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Ground Water Quality Analysis Summary Report

Sample ID (For Collection)	GW - 10525	**Test Name**	Ground Water Test
Sample Type	Ground Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	25°1'39.904"N 88°45'2.506"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-19/0) (Scope D)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.05	AAS
2	Chloride	mg/L	250	Titrimetric
3	EC	$\mu S/cm$	-	Multimeter
4	Hardness	mg/L	500	Titrimetric
5	Iron (Fe)	mg/L	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.4	AAS
7	pH	-	6.5-8.5	pH Meter
8	Salinity	%	-	Multimeter
9	Temperature	ºC	20-30	Thermometer
10	Turbidity	NTU	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	-	GC (In house)

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Test Results

S/l	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.002	0.05	AAS
2	Chloride	mg/L	20	250	Titrimetric
3	EC	$\mu S/cm$	770	-	Multimeter
4	Hardness	mg/L	60	500	Titrimetric
5	Iron (Fe)	mg/L	0.34	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.03	0.1	AAS
7	pH	-	8.0	6.5-8.5	pH Meter
8	Salinity	%	0.39	-	Multimeter
9	Temperature	°C	26.0	20-30	Thermometer
10	Turbidity	NTU	7.54	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	0.13	-	GC (In house)

Comments:

1. **All the parameters are within the acceptable limits set for the Drinking Water in ECR 2023 except for DO & COD.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure.

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Annexure - A

Government of the People's Republic of Bangladesh
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Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/6,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060129	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Ground Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Naogaon, Upa:
Care Taker: Transrail Lighting Limited.(S : GW-2)	Union:, Vill.:Tower ID: T-19/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.002	mg/L	AAS	0.001
2	Chloride	150-600	20	mg/L	Titrimetic	-
3	EC	-	770	µS/cm	Multimeter	-
4	Hardness	200-500	60	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.34	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	8.0	-	pH Meter	-
8	Salinity	-	0.39	%	Multimeter	-
9	Temperature	20-30	26.0	°C	Thermometer	-
10	Turbidity	10	7.54	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by: Signature
1.) Name: S.M. Parves Talukder
Designation: Sample Analyzer
19/06/2026
2.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer
17.06.2026

Countersigned/Approved by: Signature
1.) Name: Mita Sarker
Designation: Senior Chemist
17.06.2026
2.) Name: Md. Biplab Hossain
Designation: Chief Chemist
17/06/2026
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Ground Water Test Report of from DPHE

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Annexure - B

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

জীবনের জন্য বিজ্ঞান

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-98 of Analytical Service Cell, BCSIR, 02/06/2026
Lab/Sample ID : A-649-652
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Ground Water (Sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-649	Ground Water, **(GW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-650	Ground Water, **(GW-02)** Tower ID: T-19/0, Scope D: Niyamatpur-Patnitola	Total Petroleum Hydrocarbons (TPH)	0.13 mg/L	GC (In house)
A-651	Ground Water, **(GW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat Pirojpur-Barishal, Bhandaria	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-652	Ground Water, **(GW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Total Petroleum Hydrocarbons (TPH)	0.07 mg/L	GC (In house)

05.07.26
Analyst
Mehedi Hasan
Scientific Officer
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205

05.07.2026
Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

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Annexure - C

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Health Systems and Population Studies Division
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Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org
Laboratory of Environmental Health

Test Report
Receipt No: SRA26052400406

Lab ID No. 2026052753 (V1)
Date of Reporting: 03.06.2026
Particular of Sample: Drinking Water (GW)
Date of Sample Received: 24.05.2026
Client Address: Transrail lighting Limited (G-479) GW-2, Niyamatpur, Patnitola, Naogaon (T-19/0).

Sl. No.	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'23)	WHO Guideline for Drinking Water, 2022	Method
1	Total coliforms	CFU /100mL	0	0	0	Membrane Filtration
2	Faecal coliforms	CFU /100mL	0	0	0	Membrane Filtration

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016
Checked By :
End of the Report
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Ground Water Test Report of from icddr,b

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Ground Water Quality Analysis Summary Report

Sample ID (For Collection)	GW - 10524	**Test Name**	Ground Water Test
Sample Type	Ground Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	26°1'40.291"N 88°46'10.805"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-21/3) (Scope A & E)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.05	AAS
2	Chloride	mg/L	250	Titrimetric
3	EC	$\mu S/cm$	-	Multimeter
4	Hardness	mg/L	500	Titrimetric
5	Iron (Fe)	mg/L	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.4	AAS
7	pH	-	6.5-8.5	pH Meter
8	Salinity	%	-	Multimeter
9	Temperature	ºC	20-30	Thermometer
10	Turbidity	NTU	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	-	GC (In house)

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Test Results

S/I	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.002	0.05	AAS
2	Chloride	mg/L	20	250	Titrimetric
3	EC	*µS/cm*	780	-	Multimeter
4	Hardness	mg/L	60	500	Titrimetric
5	Iron (Fe)	mg/L	0.12	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.24	0.1	AAS
7	pH	-	7.8	6.5-8.5	pH Meter
8	Salinity	%	0.39	-	Multimeter
9	Temperature	°C	26.2	20-30	Thermometer
10	Turbidity	NTU	0.47	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	Not detectable	-	GC (In house)

Comments:

1. **All the parameters are within the acceptable limits set for the Drinking Water in ECR 2023 except for DO & COD.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure.

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Annexure - A

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Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/5,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060128	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Ground Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Nilphamari, Upa:
Care Taker: Transrail Lighting Limited.(S : GW-1)	Union:, Vill.:Tower ID: T-21/3
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.002	mg/L	AAS	0.001
2	Chloride	150-600	20	mg/L	Titrimetic	-
3	EC	-	780	µS/cm	Multimeter	-
4	Hardness	200-500	60	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	0.12	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.24	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	0.39	%	Multimeter	-
9	Temperature	20-30	26.2	°C	Thermometer	-
10	Turbidity	10	0.47	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by: Signature
1.) Name: S.M. Parves Talukder
Designation: Sample Analyzer
17/06/2026
2.) Name: Md. Saiful Alam Khosru
Designation: Sample Analyzer
17.06.2026

Countersigned/Approved by: Signature
1.) Name: Mita Sarker
Designation: Senior Chemist
17.06.2026
2.) Name: Md. Biplab Hossain
Designation: Chief Chemist
17/06/2026
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

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Ground Water Test Report of from DPHE

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Annexure - B

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

জীবনের জন্য বিজ্ঞান

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-98 of Analytical Service Cell, BCSIR, 02/06/2026
Lab/Sample ID : A-649-652
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Ground Water (Sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-649	Ground Water, **(GW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-650	Ground Water, **(GW-02)** Tower ID: T-19/0, Scope D: Niyamatpur-Patnitola	Total Petroleum Hydrocarbons (TPH)	0.13 mg/L	GC (In house)
A-651	Ground Water, **(GW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat Pirojpur-Barishal, Bhandaria	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-652	Ground Water, **(GW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Total Petroleum Hydrocarbons (TPH)	0.07 mg/L	GC (In house)

05.07.26
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BCSIR, Dhaka-1205

05.07.2026
Supervisor
Dr. Ajoy Kanti Mondal
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Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

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Annexure - C

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Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052751 (V1) Receipt No: SRA26052400405 Date of Reporting: 03.06.2026

Particular of Sample: Drinking Water (GW) Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) GW -1, Purbasadirpur, Domar, Hatibandha (T-21/3).

Sl. No.	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'23)	WHO Guideline for Drinking Water, 2022	Method
1	Total coliforms	CFU /100mL	0	0	0	Membrane Filtration
2	Faecal coliforms	CFU /100mL	0	0	0	Membrane Filtration

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
EM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

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Ground Water Test Report of from icddr,b

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Ground Water Quality Analysis Summary Report

Sample ID (For Collection)	GW - 10527	**Test Name**	Ground Water Test
Sample Type	Ground Water	**Date of Sample Collection**	24/05/2026
Date of Analysis	24/05/2026 to 17/06/2026	**Date of Report Submission**	19/07/2026
Coordinate	22°38'46.42"N 89°47'57.05"E		
Project & Client Name	**Project:** Design, Supply, Installation, Testing & Commissioning of 230 kV & 132 kV Transmission Lines in Western Zone on Turnkey Basis (Package -4) (T-AP1/0) (Scope B & G)		

Methodology

S/l	Water Quality Parameters	Unit	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.05	AAS
2	Chloride	mg/L	250	Titrimetric
3	EC	$\mu S/cm$	-	Multimeter
4	Hardness	mg/L	500	Titrimetric
5	Iron (Fe)	mg/L	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.4	AAS
7	pH	-	6.5-8.5	pH Meter
8	Salinity	%	-	Multimeter
9	Temperature	ºC	20-30	Thermometer
10	Turbidity	NTU	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	-	GC (In house)

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Test Results

S/I	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'2023)	Method of Analysis
1	Arsenic (As)	mg/L	0.044	0.05	AAS
2	Chloride	mg/L	40	250	Titrimetric
3	EC	$\mu S/cm$	820	-	Multimeter
4	Hardness	mg/L	55	500	Titrimetric
5	Iron (Fe)	mg/L	1.43	0.3-1	AAS
6	Manganese (Mn)	mg/L	0.66	0.4	AAS
7	pH	-	7.8	6.5-8.5	pH Meter
8	Salinity	%	0.41	-	Multimeter
9	Temperature	ºC	26.1	20-30	Thermometer
10	Turbidity	NTU	12.5	5	Turbidity Meter
11	Total Coliforms	CFU/100 mL	0	0	Membrane Filtration
12	Fecal Coliforms	CFU/100 mL	0	0	Membrane Filtration
13	Total Petroleum Hydrocarbon (TPH)	mg/L	0.07	-	GC (In house)

Comments:

1. **All the parameters are within the acceptable limits set for the Drinking Water in ECR 2023 except for DO & COD.**
2. Sample was collected by Site Inspectors.
3. Sample was sent to authorized laboratory(s) in sealed condition.
4. Lab Test Reports as well as sample collection pictures are attached to Annexure.

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Confidence Center, Kha-09, Shahjadpur
Gulshan, Dhaka-1212
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Annexure - A

Government of the People's Republic of Bangladesh
Office of the Chief Chemist
Department of Public Health Engineering
Central Lab, 38-39, Mohakhali C/A, Dhaka-1212
Phone: 88-02-9881927, Fax: 88-02-9882003 , Email: wqmsc_central_lab@yahoo.com

Lab Memo: 622/8,CC, DPHE, CL, Dhaka — Date: 17-06-2026

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2026060131	Sample Receiving date: 24-05-2026
Ref. Memo No: TLL/2026/Nill & Dated: 24-05-2026	Sample Source: Ground Water
Sent by:Project Correspondent ,Transrail Lighting Limited. , Dhaka.	Dist:Gopalganj, Upa:
Care Taker: Transrail Lighting Limited.(S : GW-4)	Union:, Vill.:Tower ID: T-AP1/0
Sample Collection date:	Date of Testing: 24/05/2026-17/06/2026

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.044	mg/L	AAS	0.001
2	Chloride	150-600	40	mg/L	Titrimetic	-
3	EC	-	820	µS/cm	Multimeter	-
4	Hardness	200-500	55	mg/L	Titrimetic	-
5	Iron (Fe)	0.3-1	1.43	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.66	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	0.41	%	Multimeter	-
9	Temperature	20-30	26.1	°C	Thermometer	-
10	Turbidity	10	12.5	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.
N.B: AAS - Atomic Absorption Spectrophotometer, LOQ - Limit of Quantitation.

Test Performed by: Signature
1.) Name: S.M. Parves Talukder — 17/06/2026
Designation: Sample Analyzer
2.) Name: Md. Saiful Alam Khosru — 17.06.2026
Designation: Sample Analyzer

Countersigned/Approved by: Signature
1.) Name: Mita Sarker — 17.06.2026
Designation: Senior Chemist
2.) Name: Md. Biplab Hossain — 17/06/2026
Designation: Chief Chemist
Md. Biplab Hossain
Chief Chemist
Department of Public Health Engineering
Central Laboratory Mohakhali, Dhaka

Page 1 of 1

Ground Water Test Report of from DPHE

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Annexure - B

Form No. QSF-22 Revision No. 15 Revision Date: 04 November, 2025

জীবনের জন্য বিজ্ঞান

বাংলাদেশ বিজ্ঞান ও শিল্প গবেষণা পরিষদ
BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
Institute of National Analytical Research and Service (INARS)

ANALYSIS REPORT

ASC Ref No. : IN-98 of Analytical Service Cell, BCSIR, 02/06/2026
Lab/Sample ID : A-649-652
Client's Details : **Transrail Lighting Limited**
Project Code-G 479
Sample Description : Request for Testing of Ground Water (Sample-04)
Sample Collection Date: 24-05-2026
Test Commencement Date : 02/06/2026
Test Completion Date : 05/07/2026

Lab ID	Particulars of supplied sample	Parameters	Results	Test Method (APHA)
A-649	Ground Water, **(GW-01)** Tower ID: T-21/3, Scope A & E: Purbasadirpur-Domar-Hatibandha	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-650	Ground Water, **(GW-02)** Tower ID: T-19/0, Scope D: Niyamatpur-Patnitola	Total Petroleum Hydrocarbons (TPH)	0.13 mg/L	GC (In house)
A-651	Ground Water, **(GW-03)** Tower ID: T-1/0, Scope F & H: Bagerhat Pirojpur-Barishal, Bhandaria	Total Petroleum Hydrocarbons (TPH)	Not detectable	GC (In house)
A-652	Ground Water, **(GW-04)** Tower ID: T-AP1/0, Scope B & G: Gopalganj-Shibchar-Madaripur-Faridpur	Total Petroleum Hydrocarbons (TPH)	0.07 mg/L	GC (In house)

05.07.26
Analyst
Mehedi Hasan
Scientific Officer
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205

05.07.2026
Supervisor
Dr. Ajoy Kanti Mondal
Senior Scientific Officer
Institute of National Analytical Research & Service (INARS)
BCSIR, Dhanmondi, Dhaka-1205

05/07/26
Director
Dr. Md. Salim Khan
Director (Additional In-Charge)
Institute of National Analytical Research and Service (INARS)
BCSIR, Dhaka-1205.

Page 1 of 1

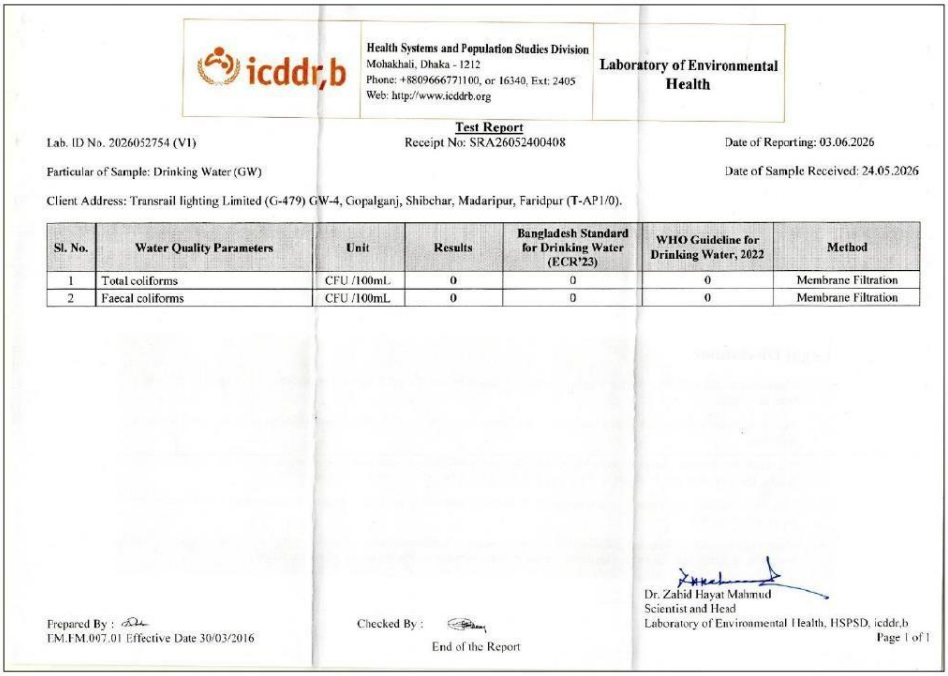
Note:
a. The results reported here are based only on the supplied samples in this laboratory.
b. Any complain about test report will not be acceptable after one month from the date of issuing of the said report.
c. This report/result shall not be reproduced/published without prior approval of the authority.

Analytical Service Cell
Dr. Qudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh
Telephone: 9671108, Fax: 88-02-9671108 E-mail:asc@bcsir.gov.bd Website: www.bcsir.gov.bd

*Ground Water Test Report of from **INARS***

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Annexure - C



icddr,b
Health Systems and Population Studies Division
Mohakhali, Dhaka - 1212
Phone: +8809666771100, or 16340, Ext: 2405
Web: http://www.icddrb.org
Laboratory of Environmental Health

Test Report

Lab. ID No. 2026052754 (V1) Receipt No: SRA26052400408 Date of Reporting: 03.06.2026

Particular of Sample: Drinking Water (GW) Date of Sample Received: 24.05.2026

Client Address: Transrail lighting Limited (G-479) GW-4, Gopalganj, Shibchar, Madaripur, Faridpur (T-AP1/0).

Sl. No.	Water Quality Parameters	Unit	Results	Bangladesh Standard for Drinking Water (ECR'23)	WHO Guideline for Drinking Water, 2022	Method
1	Total coliforms	CFU /100mL	0	0	0	Membrane Filtration
2	Faecal coliforms	CFU /100mL	0	0	0	Membrane Filtration

Dr. Zahid Hayat Mahmud
Scientist and Head
Laboratory of Environmental Health, HSPSD, icddr,b

Prepared By :
FM.FM.007.01 Effective Date 30/03/2016

Checked By :

End of the Report

Page 1 of 1

Ground Water Test Report of from icddr,b

Package 5

ISO 9001-2015

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Ref: EES/2026/MAR/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	: 02.03.2026-03.03.2026
Date of Analysis	: 05.03.2026-10.03.2026
Reporting Date	: 10.03.2026

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	23	51	88	5.1	5.3	0.49	BDL
2	**KAAQ2** Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	28	58	102	5.9	5.8	0.56	BDL
3	**KAAQ3** In front of Mamun Mia's House	30	60	96	6.2	5.6	0.58	BDL
4	**KAAQ4** In front of Late Abdul Razzak's House	34	63	108	6.5	6.7	0.53	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		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) 2023¶ 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
10.03.2026	**10.03.2026**

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ISO 9001-2015

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Ref: EES/2026/MAR/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 Commisssioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of the Sample	: Sample was collected from project area
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Date of Analysis	: 05.03.2026-10.03.2026
Reporting Date	: 10.03.2026

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		$PM_{2.5}$	PM_{10}	SPM	SO_2	NO_2	CO	Pb
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2	**KAAQ2** Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	28	58	102	5.9	5.8	0.56	BDL
3	**KAAQ3** In front of Mamun Mia's House	30	60	96	6.2	5.6	0.58	BDL
4	**KAAQ4** In front of Late Abdul Razzak's House	34	63	108	6.5	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) 2023¶ 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
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Lab Test Analyzed by	Approved By
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10.03.2026	**10.03.2026**

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Ref: EES/2026/MAR/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	: 02.03.2026-03.03.2026
Date of Analysis	: 05.03.2026-10.03.2026
Reporting Date	: 10.03.2026

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			
	L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
KANM-1 In front of Hafej Sheikh's House	52.5	62.3	32.8	36.3	47.7	32.4	Residential
KANM-2 Beside Kaliganj-Kapasia Rd. located near Nolir Bridge	53.7	64.5	31.3	40.51	47.5	33.4	Mixed
KANM-3 In front of Mamun Mia's House	53.4	55.8	33.8	33.9	37.1	30.2	Residential
KANM-4 In front of Late Abdul Razzak's House	51.5	58.8	32.3	38.4	44.5	33.8	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, 2025¶

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BANGLADESH ENVIRONMENTAL ENGINEERING
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Bangladesh,Phone: +88-02-7175845, Mobile: +88 01713034889
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	: 02 March, 2026
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	0.26	-	-	-	-	-	-
BOD_5	mg/l	6	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	18	10	10	25	50	100	100
DO	mg/l	5.33	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.28	-	-	-	-	-	-
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	63	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	14	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	6	-	-	-	-	-	-
Turbidity	NTU	11.9	-	-	-	-	-	-

*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
24.03.2026	24.03.2026	24.03.2026

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Bangladesh,Phone: +88-02-7175845, Mobile: +88 01713034889
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	: 02 March, 2026
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	6.6	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	22	10	10	25	50	100	100
DO	mg/l	5.88	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.26	-	-	-	-	-	-
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	67	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	11	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	8	-	-	-	-	-	-
Turbidity	NTU	12.3	-	-	-	-	-	-

*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
24.03.2026	24.03.2026	24.03.2026

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-03
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 03 March, 2026
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	6.8	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	20	10	10	25	50	100	100
DO	mg/l	5.1	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.31	-	-	-	-	-	-
pH	--	7.4	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	13	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	7	-	-	-	-	-	-
Turbidity	NTU	10.2	-	-	-	-	-	-

*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
24.03.2026	24.03.2026	24.03.2026

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Bangladesh,Phone: +88-02-7175845, Mobile: +88 01713034889
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-04
Location	: Nolir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 03 March, 2026
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	0.32	-	-	-	-	-	-
BOD_5	mg/l	6.3	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	23	10	10	25	50	100	100
DO	mg/l	5.1	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.32	-	-	-	-	-	-
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	49	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	11	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	7	-	-	-	-	-	-
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
24.03.2026	24.03.2026	24.03.2026

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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-01
Location	: Hafej Sheikh's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 02 March, 2026
GPS Location	: 23.968512 N; 90.548888 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-01	
Arsenic	mg/l	AAS	0.003	0.05
Cl^-	mg/l	Titrimetric	33	250*
EC	µS/cm	Multimeter	248	-
Fe	mg/l	AAS	1.3	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.4	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.06	5
Temperature	°C	Thermometer	29.6	20-30
Salinity	ppt	Multimeter	0.007	NYS
Hardness as CaCO3	mg/L	Titrimetric	11	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.04	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B); N.B: AAS- Atomic Absorption Spectrophotometer
*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
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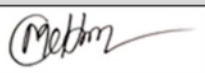
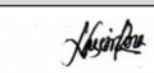
Physical/ Chemical/ Bacteriological Analysis of Water Sample

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-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	: 02 March, 2026
GPS Location	: 23.963364 N; 90.548810 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-02	
Arsenic	mg/l	AAS	0.003	0.05
Cl^-	mg/l	Titrimetric	28	250*
EC	µS/cm	Multimeter	277	-
Fe	mg/l	AAS	1.1	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.7	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.05	5
Temperature	°C	Thermometer	29.2	20-30
Salinity	ppt	Multimeter	0.003	NYS
Hardness as CaCO3	mg/L	Titrimetric	09	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.01	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B); N.B: AAS- Atomic Absorption Spectrophotometer
NYS: Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
		
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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-03
Location	: Mamun Mia's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 03 March, 2026
GPS Location	: 23.965455 N; 90.554317 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-03	
Arsenic	mg/l	AAS	0.002	0.05
Cl^-	mg/l	Titrimetric	33	250*
EC	µS/cm	Multimeter	262	-
Fe	mg/l	AAS	.8	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.6	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.07	5
Temperature	°C	Thermometer	29.8	20-30
Salinity	ppt	Multimeter	0.006	NYS
Hardness as CaCO3	mg/L	Titrimetric	6	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.02	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B); N.B: AAS- Atomic Absorption Spectrophotometer
*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
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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-03
Location	: Mamun Mia's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 03 March, 2026
GPS Location	: 23.965455 N; 90.554317 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-03	
Arsenic	mg/l	AAS	0.002	0.05
Cl^-	mg/l	Titrimetric	33	250*
EC	µS/cm	Multimeter	262	-
Fe	mg/l	AAS	.8	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.6	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.07	5
Temperature	°C	Thermometer	29.8	20-30
Salinity	ppt	Multimeter	0.006	NYS
Hardness as CaCO3	mg/L	Titrimetric	6	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.02	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B); N.B: AAS- Atomic Absorption Spectrophotometer
*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
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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-01
Location	: In front of Hafej Sheikh's House
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 02 March, 2026
GPS Location	: 23.995968N; 90.423381E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-1	
1.	Cadmium (Cd)	PPM	0.56	0.8
2.	Chromium (Cr)	PPM	28.12	100
3.	Copper (Cu)	PPM	3.18	36
4.	Lead (Pb)	PPM	6.52	85
5.	Organic Content	%	10.35	-
6.	pH	-	6.8	-
7.	Texture	mm	0.021	-

N.B: NYS=Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
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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	: 02 March, 2026
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	0.87	0.8
2.	Chromium (Cr)	PPM	43.12	100
3.	Copper (Cu)	PPM	3.25	36
4.	Lead (Pb)	PPM	9.76	85
5.	Organic Content	%	6.55	-
6.	pH	-	6.8	-
7.	Texture	mm	0.051	-

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
24.03.2026	24.03.2026	24.03.2026

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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	: 03 March, 2026
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	0.59	0.8
2.	Chromium (Cr)	PPM	29.18	100
3.	Copper (Cu)	PPM	3.22	36
4.	Lead (Pb)	PPM	5.56	85
5.	Organic Content	%	11.19	-
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
24.03.2026	24.03.2026	24.03.2026

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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	: 03 March, 2026
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	0.81	0.8
2.	Chromium (Cr)	PPM	51.38	100
3.	Copper (Cu)	PPM	3.25	36
4.	Lead (Pb)	PPM	7.21	85
5.	Organic Content	%	11.45	-
6.	pH	-	6.4	-
7.	Texture	mm	0.031	-

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
24.03.2026	24.03.2026	24.03.2026

Package 6

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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	: 17.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	34	58	103	5.7	6.2	0.49	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) 2023 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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26.02.2026	**26.02.2026**

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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	: 17.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	31	56	99	6.1	6.5	0.47	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		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) 2023 through its subsequent amendment on 19th July, 2005; vide S.R.O. NO. 220-Law/2005

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Lab Test Analyzed by	Approved By
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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	: 18.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	37	60	109	6.4	6.9	0.52	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		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) 2023 through its subsequent amendment on 19th July. 2005; vide S.R.O. NO. 220-Law/2005

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Note: BDL = Bellow the detection level

Evergreen Environmental Service

Lab Test Analyzed by	Approved By
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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	: 18.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	33	57	101	5.9	6.6	0.55	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		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) 2023 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

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Ref: EES/2026/FEB/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	: 17.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	55.14	64.9	40.3	46.27	58.1	37.6	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

Standard: Noise Pollution Control Rules, 2025

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
26.02.2026	**26.02.2026**

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Ref: EES/2026/FEB/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	: 17.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	53.27	61.4	40.1	44.35	56.8	36.4	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, 2025

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
26.02.2026	**26.02.2026**

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Ref: EES/2026/FEB/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	: 18.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	47.53	61.2	40.6	36.94	54.7	35.1	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, 2025

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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Ref: EES/2026/FEB/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	: 18.02.2026
Date of Analysis	: 19.02.2026-25.02.2026
Reporting Date	: 26.02.2026

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	48.83	58.9	39.2	38.12	53.4	35.3	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, 2025

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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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	: 18 February 2026
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	0.22	-	-	-	-	-	-
BOD_5	mg/l	7	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	29	10	10	25	50	100	100
DO	mg/l	5.13	≥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	77	1000	1000	1000	1000	1000	1000
Total Coliform	CFU/100	21	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	9	-	-	-	-	-	-
Turbidity	NTU	15.6	-	-	-	-	-	-

*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
26.02.2026	26.02.2026	26.02.2026

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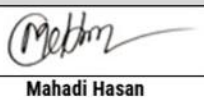
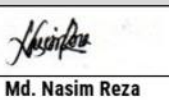
Physical/ Chemical/ Bacteriological Analysis of Water Sample

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	: 18 February 2026
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	0.34	-	-	-	-	-	-
BOD_5	mg/l	12	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	29	10	10	25	50	100	100
DO	mg/l	4.71	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.55	-	-	-	-	-	-
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	76	1000	1000	1000	1000	1000	1000
Total Coliform		27	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	5	-	-	-	-	-	-
Turbidity	NTU	12.8	-	-	-	-	-	-

*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
26.02.2026	26.02.2026	26.02.2026

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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	: 18 February 2026
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	19	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	31	10	10	25	50	100	100
DO	mg/l	4.43	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.47	-	-	-	-	-	-
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	68	1000	1000	1000	1000	1000	1000
Total Coliform		22	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	9	-	-	-	-	-	-
Turbidity	NTU	17.2	-	-	-	-	-	-

*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
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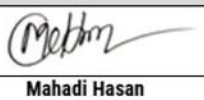
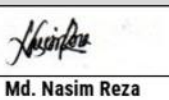
Physical/ Chemical/ Bacteriological Analysis of Water Sample

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	: 18 February 2026
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	0.34	-	-	-	-	-	-
BOD_5	mg/l	11	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	27	10	10	25	50	100	100
DO	mg/l	4.63	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.58	-	-	-	-	-	-
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	79	1000	1000	1000	1000	1000	1000
Total Coliform		26	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	18	-	-	-	-	-	-
Turbidity	NTU	14.5	-	-	-	-	-	-

*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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26.02.2026	26.02.2026	26.02.2026

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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	: 18 February 2026
GPS Location	: 23.864612 N; 90.475215 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			GWQ-01	
Arsenic	mg/l	AAS	0.009	0.05
Cl^-	mg/l	Titrimetric	42	250*
EC	µS/cm	Multimeter	297	-
Fe	mg/l	AAS	0.51	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.07	5
Temperature	°C	Thermometer	28.5	20-30
Salinity	ppt	Multimeter	0.003	NYS
Hardness as CaCO3	mg/L	Titrimetric	8	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.02	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

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
26.02.2026	26.02.2026	26.02.2026

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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	: 18 February 2026
GPS Location	: 23.864612 N; 90.475215 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			GWQ-01	
Arsenic	mg/l	AAS	0.009	0.05
Cl^-	mg/l	Titrimetric	42	250*
EC	µS/cm	Multimeter	297	-
Fe	mg/l	AAS	0.51	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.07	5
Temperature	°C	Thermometer	28.5	20-30
Salinity	ppt	Multimeter	0.003	NYS
Hardness as CaCO3	mg/L	Titrimetric	8	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.02	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

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
26.02.2026	26.02.2026	26.02.2026

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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	: 19 February 2026
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	0.005	0.05
Cl^-	mg/l	Titrimetric	61	250*
EC	µS/cm	Multimeter	252	-
Fe	mg/l	AAS	0.49	0.3-1
Mn	mg/l	AAS	0.06	0.4
pH	-	pH Meter	7.1	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.05	5
Temperature	°C	Thermometer	28.4	20-30
Salinity	ppt	Multimeter	0.005	NYS
Hardness as CaCO3	mg/L	Titrimetric	9	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.04	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

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
26.02.2026	26.02.2026	26.02.2026

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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	: 19 February 2026
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	0.007	0.05
Cl^-	mg/l	Titrimetric	39	250*
EC	µS/cm	Multimeter	292	-
Fe	mg/l	AAS	0.48	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
Temperature	°C	Thermometer	28.2	20-30
Salinity	ppt	Multimeter	0.006	NYS
Hardness as CaCO3	mg/L	Titrimetric	7	500
Total Petroleum Hydrocarbon (TPH)	mg/L	Gravimetric	0.02	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

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
26.02.2026	26.02.2026	26.02.2026

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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	: 18 February 2026
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	47.14	100
3.	Copper (Cu)	PPM	4.72	36
4.	Lead (Pb)	PPM	7.56	85
5.	Organic Content	%	8.23	-
6.	pH	-	6.8	-
7.	Texture	mm	0.041	-

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
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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	: 18 February 2026
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	0.61	0.8
2.	Chromium (Cr)	PPM	38.14	100
3.	Copper (Cu)	PPM	5.77	36
4.	Lead (Pb)	PPM	6.92	85
5.	Organic Content	%	9.53	-
6.	pH	-	6.8	-
7.	Texture	mm	0.036	-

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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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	: 18 February 2026
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	0.73	0.8
2.	Chromium (Cr)	PPM	51.29	100
3.	Copper (Cu)	PPM	4.91	36
4.	Lead (Pb)	PPM	5.65	85
5.	Organic Content	%	8.33	-
6.	pH	-	6.4	-
7.	Texture	mm	0.058	-

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
26.02.2026	26.02.2026	26.02.2026

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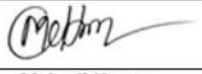
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

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	: 18 February 2026
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	0.63	0.8
2.	Chromium (Cr)	PPM	21.47	100
3.	Copper (Cu)	PPM	4.91	36
4.	Lead (Pb)	PPM	5.18	85
5.	Organic Content	%	13.82	-
6.	pH	-	6.9	-
7.	Texture	mm	0.037	-

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
26.02.2026	26.02.2026	26.02.2026

Package 7

ISO 9001-2015

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Ref: EES/2026/MAR/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	: 03.03.2026 -05.03.2026
Date of Analysis	: 08.03.2026-12.03.2026
Reporting Date	: 16.03.2026

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	94.7	50.4	22.6	BDL	7.5	7.1	9.5	0.42
2	AQ-2	107.2	58.2	23.4	BDL	8.3	5.9	10.2	0.63
3	AQ-3	92.6	48.5	20.5	BDL	7.1	6.7	8.1	0.39
4	AQ-4	104.8	62.3	28.7	BDL	10.7	14.3	9.9	0.69
5	AQ-5	101.5	60.5	25.4	BDL	9.3	13.4	9.5	0.64
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) 2023 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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Ref: EES/2026/MAR/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	: 03.03.2026 -05.03.2026
Date of Analysis	: 08.03.2026-12.03.2026
Reporting Date	: 16.03.2026

SN	Sampling ID	Concentration Present (dBA)						Category
		Day			Night			
		L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
1	NL-1	52.48	69.3	44.6	39.83	53.5	32.5	**Mixed**
2	NL-2:	50.23	65.7	42.3	37.81	51.7	31.2	**Mixed**
3	NL-3	55.37	72.4	47.7	38.55	49.2	36.6	**Mixed**
4	NL-4:	53.72	71.5	44.5	40.41	59.4	34.8	**Mixed**
5	NL-5	49.65	61.8	40.9	36.32	50.8	32.3	**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

*__Note 01__: **Sampling Location** and **GPS** have been incorporated in Chapter 3, Sub-chapter 3.1 of the Monitoring 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 132/3 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	: 03.03.2026 -05.03.2026

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	0.44	0.79	4	9	20	7.63	7.2	27.3	37	6	4.82	1.3
2	SW-2	0.30	1.0	3	10	18	7.58	7.5	26.2	29	7	5.34	1.6
3	SW-3	0.42	1.2	3	10	23	8.27	6.7	25.6	35	6	4.65	1.5
4	SW-4	0.38	0.88	5	9	15	7.19	6.3	27.4	33	7	6.12	1.4
5	SW-5	0.29	1.1	5	8	18	6.47	7.1	26.5	39	5	4.55	1.2
Unit		mg/L	mg/L	mg/L	mg/L	CFU/100 ml	mg/L	-	°C	mg/L	mg/L	NTU	mg/L

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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
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

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
22.03.2026	22.03.2026	22.03.2026

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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 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	: 03.03.2026 -05.03.2026

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters										
		Arsenic	Chloride	Coliform (Fecal)	Coliform (Total)	EC	Iron (Fe)	Manganese (Mn)	pH	Salinity	Turbidity	Temp
1	GW-01	0.003	30	0	0	434	0.7	0.04	7.2	0.17	1.51	2
2	GW-02	0.001	22	0	0	391	0.6	0.05	7.1	0.30	1.37	2
3	GW-03	0.002	14	0	0	526	0.9	0.03	7.0	0.19	2.01	2
4	GW-04	0.001	16	0	0	477	0.4	0.07	7.2	0.25	1.29	2
5	GW-05	0.002	24	0	0	542	1.5	0.06	7.4	0.32	1.65	2
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	Therm
Bangladesh Standard, ECR 2023		0.05	250*	0	0	NYS	0.3-1.0	0.4	6.5-8.5	NYS	5	20

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*NOTE: ECR=Environmental Conservation Rules, AAS=Atomic absorption spectrometry, MFM=Membrane Filtration Method, NYS=Not Yet Set, EC=Electrical Conductivity

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
22.03.2026	22.03.2026	22.03.2026

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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	: 03.03.2026 -05.03.2026

LABORATORY TEST RESULTS

SN	Sampling ID	Concentration presents in parameters						
		pH	Texture	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)	Organic Content (OC)
1	SQ-1	6.7	<0.002	1.38	4.22	0.40	27.39	10.09
2	SQ-2	6.5	<0.002	1.89	3.62	0.35	38.03	9.86
3	SQ-3	5.4	<0.002	2.15	4.57	0.38	29.32	10.49
4	SQ-4	6.2	0.054	1.93	4.79	0.26	35.61	9.16
5	SQ-5	6.0	0.048	2.47	3.83	0.43	30.44	11.54
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.

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Lab Test Performed by	Reviewed and checked by	Approved By
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24.03.2026	24.03.2026	24.03.2026

Annexure-34: Status of CAP of the Existing Substations

	
Switchyard of Existing Satkhira Substation	New transformer in Existing Kaliganj Substation



Switchyard of Existing Kushtia Substation

Annexure-35: Worker Resting Schedule

Package 4

Worker Resting Schedule Register

Project Name: ADB Bangladesh			Document Type: Rest Register
Month: Jun -26	Package:	04	Date: -20-06-2026

Worker Name	Date	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Akash	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sazu	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Samirul	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Monir	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Chonchol	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Akash	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Asif	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Shihab	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sagor	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sohib	20-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0

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

CamScanner

Worker Resting Schedule Register

Project Name: ADB Bangladesh			Document Type: Rest Register
Month: Jun -26	Package:	04	Date: -22-06-2026

Worker Name	Date	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Akash	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sazu	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Samirul	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Monir	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Chonchol	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Akash	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Asif	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Shihab	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sagor	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0
Md Sohib	22-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:12/0

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

CamScanner

Worker Resting Schedule Register

Project Name: ADB Bangladesh			Document Type: Rest Register
Month: Jun -26	Package:	04	Date: -30-06-2026

Worker Name	Date	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Md Alal	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Monir	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Jony	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Hasibul	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Kamrul	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Jamal	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Shofikul	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Imran	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Sohan	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Sidul	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1
Joshim	30-06-2026	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	Loc No:TT-1

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

CamScanner

Package 5

Project name: Dhaka and western zone transmission Grid Expansion project (P-05)

Date: 15/04/25 SWOL Labour Posting Schedule.

SL	Workers Name	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time
01	Jahangir	8:00 Am- 5:00 Pm	10:30 Am- 10:45 Am	1:00 Pm- 2:00 Pm	3:45 Pm- 4:00
02	Sadhin	〃	〃	〃	〃
03	Badol	〃	〃	〃	〃
04	Musa	〃	〃	〃	〃
05	Akash	〃	〃	〃	〃
06	Sakil	〃	〃	〃	〃
07	Tamim	〃	〃	〃	〃
08	Hamim	〃	〃	〃	〃
09	Siyam	〃	〃	〃	〃
10	Shakib	〃	〃	〃	〃
11	Aminul	〃	〃	〃	〃
12	Nirob	〃	〃	〃	〃
13	Mostafa	〃	〃	〃	〃
14	Sohidul	〃	〃	〃	〃
15	Motin	〃	〃	〃	〃
16	Razzak	〃	〃	〃	〃
17	Piyal	〃	〃	〃	〃
18	Baten	〃	〃	〃	〃
19	Sayan	〃	〃	〃	〃
20	Wazid	〃	〃	〃	〃
21	Rayhan	〃	〃	〃	〃
22	Baijid	〃	〃	〃	〃
23	Badol	〃	〃	〃	〃
24	Rakib	〃	〃	〃	〃
25	Tusar	〃	〃	〃	〃
26	Asraf	〃	〃	〃	〃
27	Minhaj	〃	〃	〃	〃
28	Sumon	〃	〃	〃	〃
29	Momon	〃	〃	〃	〃
30	Mohammad	〃	〃	〃	〃
31	Azahar	〃	〃	〃	〃

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CamScanner

SL	Worker Name	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time
		8:00 Am- 5:00 Pm	10:30 Am- 10:45 Am	1100 Pm- 2:00 Pm	3:45 Am- 4:00 Pm
32	Alal	〃	〃	〃	〃
33	Jahid	〃	〃	〃	〃
34	Sohel	〃	〃	〃	〃
35	Sadin	〃	〃	〃	〃
36	Ratul	〃	〃	〃	〃
37	Milon	〃	〃	〃	〃
38	Azad	〃	〃	〃	〃
39	Rajib	〃	〃	〃	〃
40	Kader	〃	〃	〃	〃
41	Mizan	〃	〃	〃	〃
42	Reza	〃	〃	〃	〃
43	Hamza	〃	〃	〃	〃
44	Rahul	〃	〃	〃	〃
45	Anayar	〃	〃	〃	〃
46	Rased	〃	〃	〃	〃
47	Monir	〃	〃	〃	〃
48	Aris	〃	〃	〃	〃
49	Asif	〃	〃	〃	〃
50	Imran	〃	〃	〃	〃
51	Hasan	〃	〃	〃	〃
52	Tanmoy	〃	〃	〃	〃
53	Sudeb	〃	〃	〃	〃
54	Bappy	〃	〃	〃	〃
55	Hridoy	〃	〃	〃	〃
56	Polas	〃	〃	〃	〃
57	Topo	〃	〃	〃	〃
58	Giranul	〃	〃	〃	〃
59	Bahar	〃	〃	〃	〃
60	Mawla	〃	〃	〃	〃
61	Rahat	〃	〃	〃	〃
62	Jamal	〃	〃	〃	〃

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

CamScanner

Proseef name:- Dhaka western zone transmission Grid Expansion proseet (Paekage-05)

Sub: Posting schedule Date:- 20/06/26

SL	Worker Name	Sift Time	1st Rest Time	Lunch Time	2nd Rest Time
01	Shakib	8:00 Am-5.00 Pm	10:30Am-10:45Am	1:00 Pm-2:00 Pm	3:45 Pm-4:00Pm
02	Tamim	〃	〃	〃	〃
03	Azahar	〃	〃	〃	〃
04	Hamim	〃	〃	〃	〃
05	Rakib	〃	〃	〃	〃
06	Porhad	〃	〃	〃	〃
07	Tusar	〃	〃	〃	〃
08	Rakib	〃	〃	〃	〃
09	Siyam	〃	〃	〃	〃
10	Rifat	〃	〃	〃	〃
11	Jahid	〃	〃	〃	〃
12	Nahid	〃	〃	〃	〃
13	Nadim	〃	〃	〃	〃
14	Kamal	〃	〃	〃	〃
15	Tamim	〃	〃	〃	〃
16	Sahin	〃	〃	〃	〃
17	Emon	〃	〃	〃	〃
18	Imran	〃	〃	〃	〃
19	Suzhad	〃	〃	〃	〃
20	Sakil	〃	〃	〃	〃
21	Rana	〃	〃	〃	〃
22	Nayeem	〃	〃	〃	〃
23	Parves	〃	〃	〃	〃
24	Nayan	〃	〃	〃	〃
25	Rayhan	〃	〃	〃	〃
26	Kamal	〃	〃	〃	〃
27	Kader	〃	〃	〃	〃
28	Ginarul	〃	〃	〃	〃
29	Faruk	〃	〃	〃	〃
30	Mostafa	〃	〃	〃	〃
31	Rafal	〃	〃	〃	〃

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32	Sadhin	8:00 Am-5:00 Pm	10:30 Am 10:45 Am	1:00 Pm-2:00 Pm	3:45 Pm-4:00 Pm
33	Arafat	"	"	"	"
34	Nayeem	"	"	"	"
35	Kamal	"	"	"	"
36	Kader	"	"	"	"
37	Mostafa	"	"	"	"
38	Hridoy	"	"	"	"
39	Akash	"	"	"	"
40	Rakib	"	"	"	"
41	Parves	"	"	"	"
42	Tusar	"	"	"	"
43	Emon	"	"	"	"
44	Imran	"	"	"	"
45	Tamim	"	"	"	"
46	Hamim	"	"	"	"
47	Ramim	"	"	"	"
48	Samim	"	"	"	"
49	Tanim	"	"	"	"
50	Kamrul	"	"	"	"
51	Jamel	"	"	"	"
52	Manik	"	"	"	"
53	Monir	"	"	"	"
54	Sakil	"	"	"	"
55	Shakib	"	"	"	"
56	Wazid	"	"	"	"
57	Rana	"	"	"	"
58	Sayeed	"	"	"	"
59	Masud	"	"	"	"
60	Musa	"	"	"	"
61	Nayan	"	"	"	"
62	Razu	"	"	"	"
63	Tay	"	"	"	"

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Package 6

Project name: Dhaka and Western Zone Transmission Grid Expansion Project

Package-6

Date: 8/1/26

Sl.	Worker name	Shift time	Lunch start 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	Rocky	"	"	"	"
06	Asraf	"	"	"	3:45pm – 4:00pm
07	Taj	"	11:00AM–11:15AM	"	"
08	Mamun	"	"	"	"
09	Sumon	"	"	"	"
10	Jinasul	"	"	"	"
11	Forhad	"	"	"	3:30pm – 3:44pm
12	Rafiul	"	"	"	"
13	Mamun	"	10:45AM–11:15AM	"	"
14	Rakib	"	"	"	"
15	Azad	"	"	"	"
16	Nasrul	"	"	"	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	Momin	"	"	"	"
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 – 6

Date: 12/2/2026

	worker name.	Shift Time	1st rest time	lunch Time	2nd rest time
1	Asraf	8:30am – 5:30pm	10:45AM – 11:00AM	1:00pm – 2:00pm	3:30pm – 3:45pm
2	Jafar	"	"	"	"
3	Rakim	"	"	"	"
4	Faisal	"	"	"	"
5	Rafat	"	"	"	"
6	Sakib	"	11:00AM – 11:15AM	"	"
7	Royon	"	"	"	3:45pm – 4:00pm
8	Momin	"	"	"	"
9	Fahad	"	"	"	"
10	Rocky	"	"	"	"
11	Rakib	"	10:45AM – 11:00AM	"	"
12	Kuddus	"	"	"	"
13	Robbani	"	"	"	"
14	Jahir	"	"	"	3:30pm – 3:45pm
15	Kutub	"	"	"	"
16	Kamal	"	"	"	"
17	Samad	"	11:00AM – 11:15AM	"	"
18	Habib	"	"	"	"
19	Arafat	"	"	"	3:45pm – 4:00pm
20	Romain	"	"	"	"
21	Habil	"	"	"	"
22	Sarsing	"	10:45pm – 11:00AM	"	"
23	Fazlul	"	"	"	"
24	Jakir	"	"	"	3:30pm – 3:45pm
25	Royon	"	"	"	"
26	Momin	"	"	"	"
27	Shafat	"	11:00AM – 11:15AM	"	"
28	Alif	"	"	"	"
29	Khalil	"	"	"	"
30	Babu	"	"	"	"

CHINA ELECTRIC POWER EQUIPMENT & TECHNOLOGY CO., LTD.

Package 7

Worker Resting Schedule Register

Project Name: Satkhira 132/33 KV AIS Extn. sub-station.			Document Type: Rest Register
Month: December-25	Package:	P7	Date: - 15/06/2026

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
MD. Alim	Civil-Foreman	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 : Jilhoq (GPI)

Worker Resting Schedule Register

Project Name: Meherpur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: June -26	Package:	P7	Date: - 20/06/2025

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	
Moti	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	
Miraj	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Parvej	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Hamja	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Sakib	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Hanif	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 : (SHL)

CamScanner

Worker Resting Schedule Register

Project Name: Monirampur 132/33 KV GIS Grid sub-station.			Document Type: Rest Register
Month: June -26	Package:	P7	Date: - 17/06/26

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Rasel 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	
Nasim	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	
Suvo	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Liton	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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Ibrahim	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	
Bappy	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	

Prepared by:

CamScanner

Worker Resting Schedule Register

Project Name: Phultola 132/33 KV GIS at Sub-Station.			Document Type: Rest Register
Month: June -26	Package:	P7	Date: - 15/06/2025

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Gulam Rabbi	Civil-Foreman	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Hasnif	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Naju	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Jahangir	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Shujon	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Miraz	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Shakhawat	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Hasan	Mason-Rebar	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Sakib	Mason-Bricks	08:00 AM – 05:00 PM	10:45 – 11:00 AM	01:00- 2:00 PM	04:00 – 04:15 PM	
Md Soikat	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 :

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

Worker Resting Schedule Register

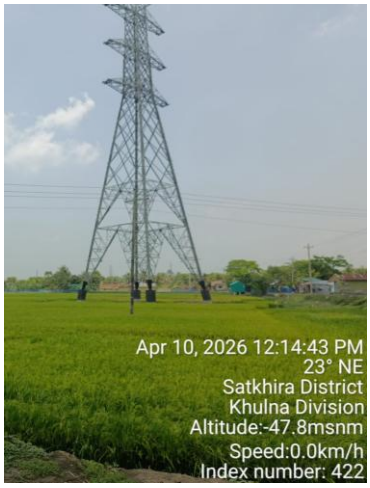
Project Name: 230/132/33 KV GIS SS, Rupsha.		Document Type: Rest Register	
Month : Feb-26	Package	P7	Date : 16.02.26

Worker Name	Department	Shift Time	1st Rest Time	Lunch Time	2nd Rest Time	Remarks
Malek	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Ashik	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Hossain	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Parvez	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Hasan	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Goutam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Kingkor	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Topu	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Hasibur Rahman	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Saiful Islam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Harun Mia	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Alal Uddin	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Jahid	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Dabotos Das	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Lalon Morol	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Hasan	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Mazarul Islam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Rabiul Morol	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Hannan	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Basarat Kha	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Aminul Islam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Yousuf	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Wasim	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Rofiqul Islam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Mehedi	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Mohidul Islam	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Akash Sheikh	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Jamal Fokir	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Kamal Hossain	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	
Sakir	Civil	8.00 AM-5.00 PM	10.30-10.45 AM	1.00-2.00 PM	4.00-4.10 PM	

Prepared By: 10.02.26

CamScanner

Annexure-36: Debris Clearance and Land Handover Following Transmission Line Tower Erection and Stringing (ECC Requirements 9 & 16)

<table>
<tr><td> 
</td><td>  </td></tr>
<tr><td>Satkhira- Rupsha TL (Package 3)</td><td>Kushtia- Meherpur TL (Package 3)</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>Domar-Hatibandha TL (Package 3)</td></tr>
</table>



Domar- Hatibandha TL (Package 4)

Annexure-37: Good Practices



Local woman recruited in Rupsha substation



Four local (Khulna) people out of the six security personnel employed in Phultola substation





Tree Plantation Programme on World Environment Day under Package 4





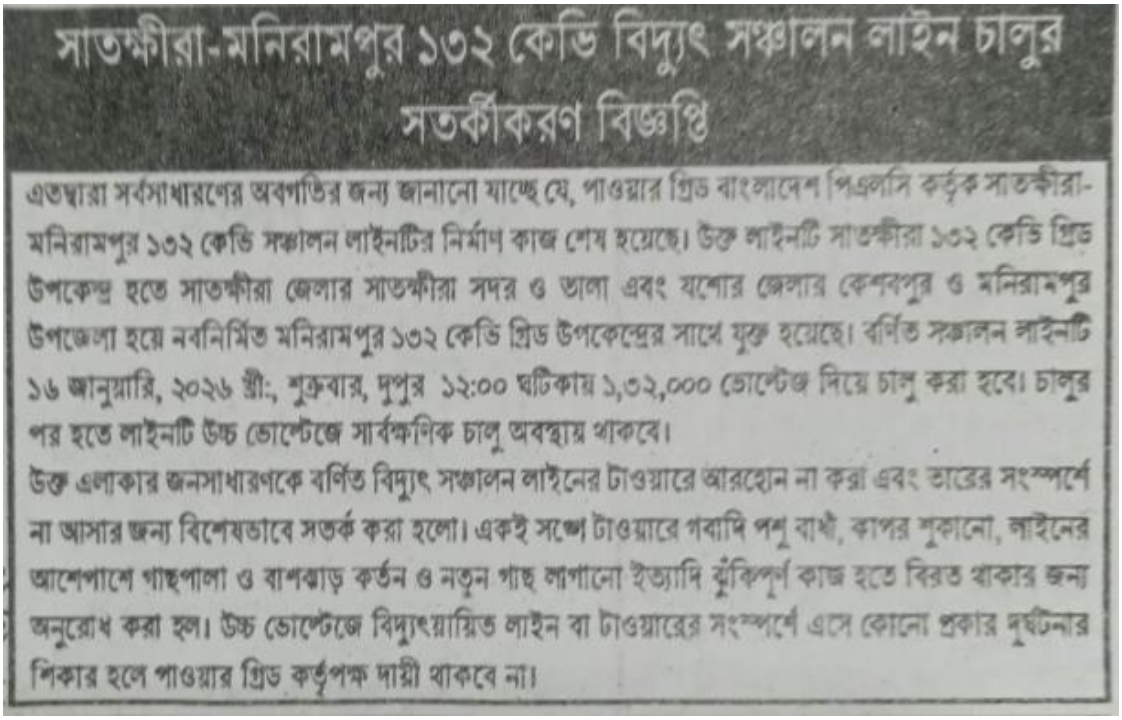
Training and Tree Plantation Programme on World Environment Day under Package 4





Tower compensation cheque handover (Purbasadipur- Domar and Domar- Hatibandha route of Package 4)

Annexure-38: Community Awareness before anti-theft charging



সাতক্ষীরা-মনিরামপুর ১৩২ কেভি বিদ্যুৎ সঞ্চালন লাইন চালুর সতর্কীকরণ বিজ্ঞপ্তি

এতদ্বারা সর্বসাধারণের অবগতির জন্য জানানো যাচ্ছে যে, পাওয়ার গ্রিড বাংলাদেশ পিএলসি কর্তৃক সাতক্ষীরা-মনিরামপুর ১৩২ কেভি সঞ্চালন লাইনটির নির্মাণ কাজ শেষ হয়েছে। উক্ত লাইনটি সাতক্ষীরা ১৩২ কেভি গ্রিড উপকেন্দ্র হতে সাতক্ষীরা জেলার সাতক্ষীরা সদর ও তালা এবং যশোর জেলার কেশবপুর ও মনিরামপুর উপজেলা হয়ে নবনির্মিত মনিরামপুর ১৩২ কেভি গ্রিড উপকেন্দ্রের সাথে যুক্ত হয়েছে। বর্ণিত সঞ্চালন লাইনটি ১৬ জানুয়ারি, ২০২৬ খ্রী:, শুক্রবার, দুপুর ১২:০০ ঘটিকায় ১,৩২,০০০ ভোল্টেজ দিয়ে চালু করা হবে। চালুর পর হতে লাইনটি উচ্চ ভোল্টেজে সার্বক্ষণিক চালু অবস্থায় থাকবে।

উক্ত এলাকার জনসাধারণকে বর্ণিত বিদ্যুৎ সঞ্চালন লাইনের টাওয়ারে আরোহন না করা এবং তারের সংস্পর্শে না আসার জন্য বিশেষভাবে সতর্ক করা হলো। একই সঙ্গে টাওয়ারে গবাদি পশু বাধাঁ, কাপর শুকানো, লাইনের আশেপাশে গাছপালা ও বাশঝাড় কর্তন ও নতুন গাছ লাগানো ইত্যাদি ঝুঁকিপূর্ণ কাজ হতে বিরত থাকার জন্য অনুরোধ করা হল। উচ্চ ভোল্টেজে বিদ্যুৎয়ায়িত লাইন বা টাওয়ারের সংস্পর্শে এসে কোনো প্রকার দুর্ঘটনার শিকার হলে পাওয়ার গ্রিড কর্তৃপক্ষ দায়ী থাকবে না।

Announcement in the local newspaper before anti-theft charging of Satkhira-Monirampur TL



Announcement in the locality before anti-theft charging of Satkhira- Manirampur TL

Annexure-39: Tree Plantation Carried out in Khulna Sub Station

Annexure-40: Letter on SSEMP and Organization Chart Submission for Package 8

পাওয়ার গ্রিড বাংলাদেশ পিএলসি
POWER GRID BANGLADESH PLC
(An Enterprise of Bangladesh Power Development Board)

Ref. No. 27.21.0000.101.07.321.26. 877 Date: 16th June, 2026

CCCE-ETERN Consortium
No. 16, Zone 3, Yanqi Industrial Development Zone
Huairo District, Beijing, P. R. China.
Email: wangxin@ccceng.cn, ccce.tender@ccceng.cn

Subject: Submission of Organization Chart and Site Specific Environmental Management Plan (SSEMP).

Project: Design, Supply, Installation, Testing and Commissioning of 230/33 kV GIS Substation at Bhola and 132/33 kV GIS Substations at Domar, Hatibandha, Shibchar, Bhanga, Jhalokathi, Pirojpur on Turnkey Basis (Contract No. PGCB/AIIB/L8374/DWZTGEP/GIS/P8(Re-tender), dated: 04.06.2026).

Dear Sir,
Please be informed that as per GCC Clause 18.1, the Contractor is required to submit the Contractor's organization chart including the identities of key personnel assigned for the Works under the contract, along with their respective curricula vitae for the Employer's review and record.

Furthermore, as stipulated in SCC Clause 9.8(c), the Contractor shall prepare and submit the Site Specific Environmental Management Plan (SSEMP) for the respective work sites and obtain approval from the Employer prior to commencement of any construction activities at the site.

In this regard, you are hereby requested to submit the organization chart & Site Specific Environmental Management Plan (SSEMP) for the respective work sites. Your prompt response in this regard will be highly appreciated.

Thanking you,
16.6.26
(Mohammed Faizul Kabir)
Project Director & Chief Engineer
DWZTGEP, Power Grid, Dhaka.
E-mail: pd.dwztgep@pgcb.gov.bd

Copy to:
1.Executive Director (P&D), Power Grid, Dhaka
2. Deputy Project Director(A/C), DWZTGEP, Power Grid, Dhaka.
3. Executive Engineer, DWZTGEP, Power Grid, Dhaka.
4. Office Copy

Grid Bhaban, Avenue-3, Jahurul Islam City, Aftabnagar, Badda, Dhaka-1212
Web: www.powergrid.gov.bd, Telephone : +88-02 226600936-39, Fax: +88-02 226600925, E-mail: info@pgcb.gov.bd

Annexure-41: Approved TPP of Package 3 and 4

https://drive.google.com/drive/folders/1a3x8D1tE_Rx3tjrZnDI8cbgLmDzMbNXf?usp=drive_link

Annexure-42: Tree Plantation Inventory

Sl. No.	Package	Location	Month	Coordinates	Plantation Site	Plantation Date	Species Name	No. of Saplings Planted	Tree Code No.	Survival Status (Alive/Dead)	Survival Rate (%)	Replacement Required (Yes/No)	Maintenance Status	Photographic Evidence	Remarks
1	Package 3			XXX	Substation Boundary	5-Jun-26	Neem (*Azadirachta indica*)	50		48 Alive	96	No	Good		Healthy growth
2	Package 3			XXX	Access Road	5-Jun-26	Rain Tree (*Samanea saman*)	30		29 Alive	97	No	Good		Regular watering

Annexure-43: New Waste Register for all Contractors

Sl. No.	Package	Waste Type	Quantity	Generation Date	Storage Date	Transfer Date	Collector	Collector Authorization	Vehicle/Transfer Ref.	Manifest/Receipt No.	Final Destination	Disposal Date	Evidence
1	P-1	Non-hazardous	[Actual]	[Date]	[Date]	[Date]	[Name]	[Authorization]	[Ref.]	[Receipt]	[Facility]	[Date]	Photo/record
2	P-1	Hazardous	[Actual]	[Date]	[Date]	[Date]	[Name]	[Authorization]	[Ref.]	[Manifest]	[Facility]	[Date]	Record
3	P-3	E-waste	[Actual/ Not generated]	—	—	—	—	—	—	—	—	—	—

Annexure-44: New Incident Register for all Contractors

Sl. No.	Package	Date	Classification	Description of Incident	Root Cause	Corrective Action	Responsible Person/Organization	Closure Date	Supporting Evidence
1									
2									
3									
4									