Environmental Monitoring Report

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Semestral Report (July-December 2023)
January 2024

Bangladesh: Dhaka Water Supply Network Improvement Project

Prepared by the Dhaka Water Supply and Sewerage Authority (DWASA), Government of Bangladesh for the Asian Development Bank (ADB).

DHAKA WATER SUPPLY NETWORK IMPROVEMENT PROJECT
(DWSNIP, ADB Loan No. 3397-BAN)

PROJECT MANAGEMENT UNIT

12th SEMI ANNUAL ENVIRONMENTAL MONITORING REPORT (SEMR)

(Period July-December, 2023)

January 2024

Dhaka Water Supply and Sewerage Authority (DWASA)

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ABBREVIATIONS

ADB	–	Asian Development Bank
ARE	-	Assistant Resident Engineer
BRM	-	Bangladesh Resident Mission
BOD_5	-	Biochemical Oxygen Demand in 5 days
CPP	-	China Petroleum Pipeline Engineering Company Ltd.;
CFMCC	-	China First Metallurgical Group Co. Ltd.
COVID	-	Corona Virus Disease of 2019
CME	-	Contract Management Expert
DWASA	-	Dhaka Water Supply and Sewerage Authority
DWSNIP	-	Dhaka Water Supply Network Improvement Project
DMA	-	District Metering Area
DMSC	-	Design, Management and Supervision Consultants
DoE	-	Department of Environment
DTW	-	Deep Tube well
ECC	-	Environmental Clearance Certificate
EMP	-	Environmental Management Plan
EIA	-	Environmental Impact Assessment
GoB	-	Government of Bangladesh
GRC	-	Grievance Redress Committee
GRM	-	Grievance Redress Mechanism
HDD	-	Horizontal Directional Drilling
ICB	-	International Competitive Bidding
IEE	-	Initial Environmental Examination
LGD	-	Local Government Division
PMU	–	Project Management Unit
PCU	-	Project Coordination Unit
PPE	-	Personnel Protective Equipment
PM	-	Project Manager
PM10	-	Particulate Matter diameter less than 10 micron
PM2.5	-	Particulate Matter diameter less than 2.5 micron
SCC	-	Site Clearance Certificate
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement
SEMR	-	Semi Annual Environmental Monitoring Report
SEP	-	Site Environmental Plan
SEMP	-	Site Specific Environmental Management Plan
SIU	-	Safeguard Implementation Unit

EXECUTIVE SUMMARY

Dhaka Water Supply Network Improvement Project (DWSNIP) has been initiated by Dhaka Water Supply and Sewerage Authority (DWASA) in improving the water supply distribution network in various zones of Dhaka City. The estimated cost of the Project is US$ 408 million. The Government of the People's Republic of Bangladesh (GOB) has obtained a loan of US$ 275 million from the Asian Development Bank (ADB Loan: 3397-BAN) and the balance US$133 million equivalent would be financed by the GOB. The Project will implement 75 DMAs in which about 1669 km pipe lines will be rehabilitated including about 148,230 service connections. The Project has five (5) contract packages and the expectation to complete by the year 2024 (As proposed in RDPP). The Project was classified as Category Red by the Department of Environment (DoE) and a Category B project by the Asian Development Bank (ADB).

The Safeguard Experts and Executive Engineers were deployed in the PMU and PCU level along with the DMS Environmental Team, Resettlement Specialist and Social /Gender Experts are already on board. The Environmental Clearance Certificates were obtained, for different packages/batches, from DoE during 12 June 2019. As per condition of ECC provided by DoE, DWASA obtained Renewal Certificates from DoE during June 2020 (the first renewal certificate), June 2021 (second renewal certificate) and July 2022 (third renewal certificate) and June 2023 (fourth renewal certificate). All renewal certificates obtained from DoE are attached in **Annex-3**

For implementation of EMP, arrangement of human safety, provision of PPE for workers engaged in construction is being implemented. Training is being provided to the contractors' representatives by DMSC's Environmental Team. Moreover, instruction has been provided to follow the specified clause of BID document to mitigate environmental and social impacts. Measures were taken to protect and facilities and locations of social and cultural importance (hot spots). Measures were taken to comply with occupational health and safety including measures to combat COVID19 situation.

Contractors have been taking mitigative measures and maintaining records through reporting of different potential environmental impacts associated with construction activities which are Air pollution, Noise pollution, Water pollution, etc. During the reporting period, ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1) have conducted during construction monitoring (air, noise and water quality) for DMA during civil works. NCB 2.12A, NCB 2.12D and NCB 2.12E has conducted baseline monitoring (air, noise and water quality) for DMA before starting the civil works and construction monitoring. The Environmental Management Implementation Work Schedule has been prepared for next six months (January-June, 2024) to implement the EMP plan wise while showing precisely how and when construction period mitigation and monitoring actions will take place.

With the outbreak of COVID 19 Pandemic and subsequent lockdown, most of the activities in the country stopped temporarily until the country became normal. The Addendum Health and Safety (H&S) Plans in response to COVID-19 were developed by all civil works contractors and approved by PMU as well as ADB.

Based on the foregoing observations, findings and environmental monitoring carried out from July-December, 2023, it may be concluded that ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2) and NCB 2.11D (Lot-1&2) under DWSNIP subprojects (DMAs) have been implemented as just satisfied.

I. INTRODUCTION

A. Background

1. Dhaka Water Supply Network Improvement Project (DWSNIP) has been initiated by Dhaka Water Supply and Sewerage Authority (DWASA) for improving the water supply distribution network in various zones of Dhaka City. The estimated cost of the Project is US$ 408 million. The Government of the People's Republic of Bangladesh (GOB) has obtained a loan of US$ 275 million from the Asian Development Bank (ADB Loan: 3397-BAN) and the balance US$133 million equivalent would be financed by the GOB. The Project will implement in 75 DMAs where 1669 km (approximately) pipe lines will be rehabilitated and installed including about 148,230 service connections and 50 PTWs. The Project has been divided into five (5) contract packages and the packages will take 17 to 36 months for implementation with an expectation to be completed December, 2024 (As proposed in RDPP). The objectives targeted from the Project are:

- To reduce NRW and achieve 24 hours water supply in the targeted 85 DMAs (As per approved DPP).
- To provide new or regular connections to low-income communities.

2. The project area of each package is shown in Figure-1 and summary of the Construction packages are depicted in Table 1.

Figure 1: Project Area

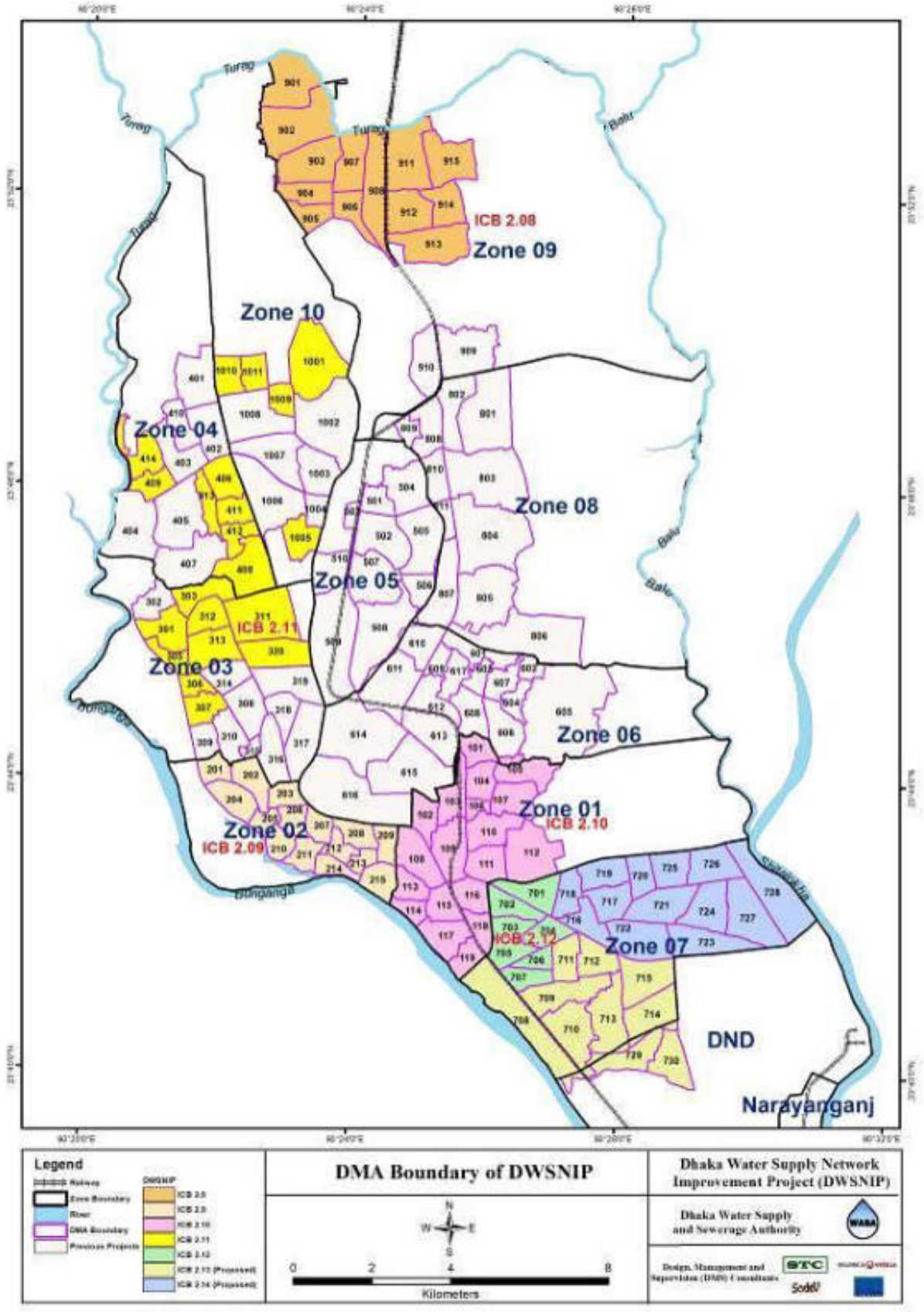


Table 1: Summary of Works in all Packages under DWSNIP (As of December, 2023)

ICB Packages	NCB Packages	MODS Zone	DMA Nos.	Design Pipeline Km	Service Connection nos. (as per BOQ)	Deep Tube well (nos.) ((as per BOQ))	Contract Amount (US$ in Million)	Construction Duration days	Name of Contractor	Remarks
ICB 2.8	-	9	16	457.41	39,297	10	46.84	1745	CPP	Awarded
ICB 2.9	-	2	19	275.3	33,903	10	27.46	1658	CFMCC	As per final design, length has been changed
ICB 2.10	-	1	21	340.75	39,067	10	45.18	1126	CCSEB-RPL (JV)	As per final design, length has been changed
ICB 2.11	NCB-2.11A to 2.11D and NCB 2.6	3,4,10	21	453.41	44,841	10	53.89	1000	The Civil Engineers Ltd, RFL Plastic Ltd, PDL-AEDL-JV., M/S MAN Enterprise	Awarded
ICB 2.12	NCB-2.12A to 2.12E	7	8	163.95	16,100	10	19.42	540	Falgu Sandhani Ltd., HIETC-SRC JV, RFL Plastic Limited, The Civil Engineers Ltd.	Awarded
Total Civil Works			**85**	**1690.82**	**173,208**	**50**				

Source: DMS Consultants, December 2023

B. Purpose of the Report

3. This is the Semi-annual Environmental Monitoring Report (SEMR) prepared by PMU for the monitoring period of July-December, 2023. This SEMR provides the status of project, presents preparation and implementation of environmental management, mitigation and monitoring actions, and reports status of compliance with Environmental Management Plans (EMPs) and loan covenants.

C. Approach and Methodology

4. The report has been prepared through review and monitoring the necessary environmental compliances with respect to (i) Environmental safeguards, (ii) loan covenants and (iii) implementation of Environmental Management and Monitoring Plans of ADB approved IEE reports for all subprojects. The report also referred the Environmental covenants, Initial Environmental Examination report approved by ADB, Environmental

Monitoring Reports and Aid- Memoires prepared by ADB. The approach and methodology include the following work plan.

5. Activity 1: Collection of relevant documents/reports included Initial Environmental Examination report approved by the ADB, Environmental Monitoring Reports and Aid-Memoires prepared by ADB etc.

6. Activity 2: On the basis of Environmental due diligence review conducted to strengthen and followed the agreed Environmental compliances. Major decisions have been taken to address the shortfalls identified and bridging the gaps.

7. Activity 3: Site visits were carried out for the Environmental monitoring of the sub projects. Checklists were prepared to monitor the Environmental safeguards. Focused Group Discussions were carried out for public consultations. The shortcomings observed during the field visits have been communicated with the Corrective Action Plan for remedial measures. The same have already been initiated by the PMU and PCU and the concerned contractors.

D. Environmental Categorization

According to ADB Safeguard Policy Statement, 2009

8. Sub projects under Five Packages (ICB 2.8, ICB 2.9, ICB 2.10, ICB 2.11 and ICB 2.12) under DWSNIP has been classified by ADB as environmental assessment category B (some negative impacts but less significant than category A) and the impacts of subprojects were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy (SPS 2009).

According to National Laws and Regulations

9. As per Schedule 1 of ECR, 1997 all packages under DWSNIP are likely to be classified as red category (serial number 64 under ECR) which requires Environmental Clearance Certificate (ECC) from the Department of Environment (DoE). Maintaining all the formalities (after submission of EIA report, Feasibility report, Fees etc.), DWASA obtained ECC from DoE on June 12, 2019. As per condition of ECC (requirements of Renewal of ECC in every year), DWASA obtained First Renewal Certificate from DoE during June, 2020 (validity of which was up to June 2021), Second Renewal Certificate from DoE during June, 2021 (validity of which was up to June 2022) and Third Renewal Certificate from DoE during July, 2022 (validity of which was up to June 2023). And Forth renewal certificate from DoE during November, 2023 (validity of which is up to June, 2024). All renewal certificates obtained from DoE are attached in **Annex-3**

10. DWSNIP civil works is divided into five contracts (packages): ICB 2.8 covering 13 DMAs, ICB 2.9 covering 15 DMAs, ICB 2.10 covering 20 DMAs, ICB 2.11 (NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1&2) NCB 2.6) covering 21 DMAs, and ICB 2.12 (NCB 2.12A, NCB 2.12B, NCB 2.12C, NCB 2.12D and NCB 2.12E) covering 8 DMAs.

11. Till 31st December, 2023, construction contract agreements have been signed for all five (5) packages under DWSNIP. Among 5 packages, ICB 2.8 signed contract for zone 9 on 9th May, ICB 2.9 signed contract for zone 2 on 22nd November, ICB 2.10 signed contract for zone 1 on 30th July, 2020, ICB 2.11 signed contract for zone 3, 4 and 10 on 4th April 2018 and ICB 2.12 signed contract for zone 7 on 26th November, 2020. However,

construction contract agreements for ICB 2.11 and ICB 2.12 have been terminated and then rewarded again as NCB packages. Table 2 shows various subproject progress and status of the three ICB packages which are under construction.

Table 2 A: Subprojects Implementation status till December, 2023

Package Number	Designed Interventions	Status of Implementation			% of Progress of activities	Expected Completion Date
		Pipe line (Km)	House Connection (nos.)	DTW Headworks upgradation (nos.)		
ICB 2.08	DMA Nos. – 16 nos Pipeline – 455.8km Service Connections- 30,945 nos. Upgradation of DTW pump- 63 nos	455.8	30,945	63	99.60%	30.06.2023
ICB 2.09	DMA Nos: 19- DMAs Pipeline: 275 (km) Service Connections: 33903 (nos.) Upgradation of DTW pump: 57 (nos.)	266.70	31,860	58	96.87%	30.06.2023
ICB 2.10	DMA Nos. – 21 nos Pipeline – 474 km Service Connections- 45340 nos. Up gradation of DTW pump- 85 nos	332	30,274	64	70%	30.06.2024
NCB 2.11A	DMA Nos. – 06 nos Pipeline – 29.65 km Service Connections-9008 nos. Upgradation of DTW pump- 35 nos	25	7500	30	80 %	30.05.2024
NCB 2.11B	DMA Nos. – 4 nos Pipeline – 94.79km Service Connections- 7,977nos. Upgradation of DTW pump- 28 nos	14.5	1040	-	63%	30.04.2024

NCB 2.11C Lot 1	DMA Nos. – 3 nos Pipeline – 68.84km Service Connections-7,154 nos. Upgradation of DTW pump- 20 nos	49.54	3,124	-	62.1%	30.04.2024
NCB 2.11C Lot 2	DMA Nos. – 3 nos Pipeline – 66.67km Service Connections-7,044 nos. Upgradation of DTW pump- 16 nos	17.43	1927	-	54.49%	30.04.2024
NCB 2.11D Lot 1	DMA Nos. – 3 nos Pipeline – 66.80km Service Connections-8,567 nos. Upgradation of DTW pump- 18 nos	20.5	2651	-	52.03%	30.04.2024
NCB 2.11D Lot 2	DMA Nos. – 02 nos Pipeline – 48.36 km Service Connections-5712 nos. Upgradation of DTW pump- 12 nos	29.31	2384	5	60 %	30.04.2024

Source: DMS Consultants, December 2023

Table 2 B: Progress on Implementation of EMP (up to December 2023)

Activity	**ICB 2.08 (13-DMAs in 3-batches)**	**ICB 2.09 (15 DMAs in 4-batches)**	**ICB 2.10 (21 DMAs in 4-batches)**	**NCB 2.11 (21 DMAs in 6-NCB packages)**	**NCB 2.12 (8 DMAs in 5-NCB Packages)**
Updating IEE Reports with site specific EMP	All DMAs Approved by ADB and disclosed	All DMAs Approved by ADB and disclosed	All DMAs Approved by ADB and disclosed	All DMAs Approved by ADB and disclosed	NCB 2.12A, NCB 2.12D and NCB 2.12E; 3 NCB packages have been submitted to ADB and NCB 2.12B and NCB 2.12C preparation ongoing.
Monitoring and Reporting					
Monthly internal progress reports	All monthly reports under 5 different packages (ICB 2.10, NCB-2.11A, NCB 2.11B, NCB 2.11C; Lot-1, NCB 2.11C; Lot-2, NCB 2.11D; Lot-1, and NCB 2.11D; Lot-2) prepared by the Contractors during construction, submitted to DMS and PMU. These monthly reports include; (a) physical progress of each component; (b) mitigation measures implemented; (c) grievances received and resolved as directed in GRM				
Quarterly Progress Reports (QPR)	Quarterly Progress Report on performance of contractors on EMP implementation has been submitted till September 2023 (started since commencement)				
Semi-annual Environmental Monitoring Reports (SEMR)	11th – SEMRs submitted and approved and 12th SEMR – now being sent for approval				
Environmental Quality Monitoring					
Activity	**ICB 2.08**	**ICB 2.09**	**ICB 2.10**	**NCB 2.11**	**NCB 2.12**
Air Quality Sampling and Testing (CO, $S0_2$, $N0_2$, SPM, $PM_{2.5}$, PM_{10})	Pre construction Phase monitoring – completed all DMAs Construction phase monitoring - completed in all DMAs.	Pre construction Phase monitoring – completed all DMAs Construction phase monitoring - completed in all DMAs.	Preconstruction Phase monitoring – completed in DMA101 DMA102 DMA103 DMA104 DMA105 DMA106 DMA107 DMA108A DMA108B DMA109A DMA109B DMA110 DMA111 DMA112	**NCB 2.11A** Preconstruction Phase monitoring – completed in DMA301, DMA303, DMA306, DMA311, DMA320, DMA408 Construction Phase monitoring completed in DMA311 DMA408	**NCB 2.12A** Preconstruction Phase monitoring completed in DMA 701A and DMA 701B Construction monitoring – Construction works yet to be started.

			DMA113 DMA114 DMA115 DMA116 DMA117 DMA118 DMA119 Construction phase monitoring - completed in DMA107 DMA108A DMA108B DMA110 DMA113 DMA114 DMA115 DMA116 DMA119	**NCB 2.11B** Preconstruction Phase monitoring – completed in DMA 305, DMA 307, DMA 312, DMA 313 Construction phase monitoring - completed in DMA 307	**NCB 2.12B** Preconstruction Phase monitoring completed in DMA702, DMA703 Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-1 Preconstruction Phase monitoring – completed in DMA 406, DMA 411, DMA 412 Construction phase monitoring - completed in DMA 406, DMA 411, DMA 412	**NCB 2.12C** Preconstruction Phase monitoring completed in DMA706, DMA707 Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-2 Preconstruction Phase monitoring – completed in DMA 409, DMA 413, DMA 414 Construction phase monitoring - completed in DMA 409	**NCB 2.12D** Preconstruction Phase monitoring completed in DMA704 Construction monitoring – Construction works yet to be started.
				NCB 2.11D, L-1 Preconstruction Phase monitoring – completed in DMA 1005, DMA 1010, DMA 1011 Construction phase monitoring - completed in DMA 1010	**NCB 2.12E** Preconstruction Phase monitoring completed in DMA705 Construction monitoring – Construction works yet to be started.

				NCB 2.11D, L-2 Preconstruction Phase monitoring – completed in DMA 1001, DMA 1009 Construction Phase monitoring has not been done during reporting time	
Noise (dBA for day and night time)	Pre construction Phase monitoring – completed all DMAs Construction phase monitoring - completed in DMA 901, DMA 902, 903, DMA 904, DMA 905, DMA 906, DMA 907, DMA 911, DMA 912, DMA 913, DMA 914 and DMA 915	Pre construction Phase monitoring completed in all DMAs Construction Phase monitoring completed in DMAs 201, 203, 204, 205, 206, 208, 209, 210, 213, 214 and 215	Preconstruction Phase monitoring – completed in DMA101 DMA102 DMA103 DMA104 DMA105 DMA106 DMA107 DMA108A DMA108B DMA109A DMA109B DMA110 DMA111 DMA112 DMA113 DMA114 DMA115 DMA116 DMA118 DMA117 DMA119 Construction phase monitoring - completed in DMA107 DMA108A DMA108B DMA110 DMA113 DMA114 DMA115 DMA116 DMA119	**NCB 2.11A** Preconstruction Phase monitoring – completed in DMA301, DMA303, DMA306, DMA311, DMA320, DMA408 Construction Phase monitoring completed in DMA311 DMA408	**NCB 2.12A** Preconstruction Phase monitoring completed in DMA 701A and DMA 701B Construction monitoring – Construction works yet to be started.
				NCB 2.11B Preconstruction Phase monitoring – completed in DMA 305, DMA 307, DMA 312, DMA 313 Construction phase monitoring - completed in DMA 307	**NCB 2.12B** Preconstruction Phase monitoring completed in DMA702, DMA703 Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-1 Preconstruction Phase monitoring – completed in DMA 406, DMA 411, DMA 412 Construction phase monitoring - completed in	**NCB 2.12C** Preconstruction Phase monitoring completed in DMA706, DMA707 Construction monitoring – Construction works yet to be started.

				DMA 406, DMA 411, DMA 412	
				NCB 2.11C, L-2 Preconstruction Phase monitoring – completed in DMA 409, DMA 413, DMA 414 Construction phase monitoring - completed in DMA 409	**NCB 2.12D** Preconstruction Phase monitoring completed in DMA704 Construction monitoring – Construction works yet to be started
				NCB 2.11D, L-1 Preconstruction Phase monitoring – completed in DMA 1005, DMA 1010, DMA 1011 Construction phase monitoring - completed in DMA 1010	**NCB 2.12E** Preconstruction Phase monitoring completed in DMA705 Construction monitoring – Construction works yet to be started.
				NCB 2.11D, L-2 Preconstruction Phase monitoring – completed in DMA 1001, DMA 1009 Construction Phase monitoring has not been done during reporting time	
Surface Water Quality (SS, pH, DO, BOD5, COD, As, Cl, Fe, Mn)	Pre-construction phase monitoring – completed in DMA903, DMA904, DMA906, DMA907, DMA908 Construction phase	Pre construction Phase monitoring- completed in (DMAs 203, 207, 208, 209 and 215); Construction Phase monitoring	Preconstruction Phase monitoring completed in DMA101 DMA102 DMA103 DMA104 DMA105 DMA106 DMA107	**NCB 2.11A** Preconstruction Phase monitoring has not been done during reporting time Construction Phase monitoring has not been done during reporting	**NCB 2.12A** Preconstruction Phase monitoring not completed Construction monitoring – Construction works yet to be started.

	–completed in DMA903, DMA904, DMA906, DMA907	completed in DMAs 203, 208, 209 and 215	DMA108A DMA108B DMA109A DMA109B DMA110 DMA111 DMA112 DMA113 DMA114 DMA115 DMA116 DMA117 DMA118 DMA119 Construction phase monitoring - completed in DMA101 DMA105 DMA107 DMA108A DMA108B DMA113 DMA114 DMA115 DMA116	time	
				NCB 2.11B Preconstruction Phase monitoring – completed in DMA 305, Construction Phase monitoring has not been done during reporting time	**NCB 2.12B** Preconstruction Phase monitoring not completed Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-1 Preconstruction Phase monitoring – completed in DMA 406, DMA 411 Construction Phase monitoring has not been done during reporting time	**NCB 2.12C** Preconstruction Phase monitoring not completed Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-2 Preconstruction Phase monitoring – completed in DMA 409, Construction Phase monitoring has not been done during reporting time	**NCB 2.12D** Preconstruction Phase monitoring not completed Construction monitoring – Construction works yet to be started
				NCB 2.11D, L-1 Preconstruction Phase monitoring – has not been done during reporting time Construction Phase monitoring has not been done during reporting time	**NCB 2.12E** Preconstruction Phase monitoring not completed Construction monitoring – Construction works yet to be started.

				NCB 2.11D, L-2 Preconstruction Phase monitoring – has not been done during reporting time Construction Phase monitoring has not been done during reporting time	
Groundwater Quality ((pH, DO, BOD5, COD, As, Cl, Fe, Mn and Total Coliform)	Pre construction Phase monitoring – completed all DMAs Construction phase monitoring - completed in DMA 901, DMA 902, DMA 903, DMA 904, DMA 905, DMA 906, DMA 907, DMA 911, DMA 912, DMA 913, DMA 914 and DMA 915	Pre construction Phase monitoring completed in all DMAs Construction Phase monitoring completed in DMAs 201, 203, 204, 205, 206, 208, 209, 210, 213, 214 and 215	Preconstruction Phase monitoring completed in DMA101 DMA102 DMA103 DMA104 DMA105 DMA106 DMA107 DMA108A DMA108B DMA110 DMA113 DMA114 DMA115 DMA116 DMA118 DMA119 Construction phase monitoring - completed in DMA101 DMA105 DMA107 DMA108A DMA108B DMA113 DMA114 DMA115 DMA116	**NCB 2.11A** Preconstruction Phase monitoring – completed in DMA301, DMA303, DMA306, DMA311, DMA320, DMA408 Construction Phase monitoring has not been done during reporting time	**NCB 2.12A** Preconstruction Phase monitoring completed in DMA 701A and DMA 701B Construction monitoring – Construction works yet to be started.
				NCB 2.11B Preconstruction Phase monitoring – completed in DMA 305, DMA 307, DMA 312, DMA 313 Construction phase monitoring - completed in DMA 307	**NCB 2.12B** Preconstruction Phase monitoring completed in DMA702, DMA703 Construction monitoring – Construction works yet to be started.
				NCB 2.11C, L-1 Preconstruction Phase monitoring – completed in DMA 406, DMA 411, DMA 412 Construction phase monitoring - completed in	**NCB 2.12C** Preconstruction Phase monitoring completed in DMA706, DMA707 Construction monitoring – Construction works yet to be started.

				DMA 406, DMA 411, DMA 412	
				NCB 2.11C, L-2 Preconstruction Phase monitoring – completed in DMA 409, DMA 413, DMA 414 Construction phase monitoring - completed in DMA 409	**NCB 2.12D** Preconstruction Phase monitoring completed in DMA704 Construction monitoring – Construction works yet to be started
				NCB 2.11D, L-1 Preconstruction Phase monitoring – completed in DMA 1005, DMA 1010, DMA 1011 Construction phase monitoring - completed in DMA 1010	**NCB 2.12E** Preconstruction Phase monitoring completed in DMA705 Construction monitoring – Construction works yet to be started.
				NCB 2.11D, L-2 Preconstruction Phase monitoring – completed in DMA 1001, DMA 1009 Construction Phase monitoring has not been done during reporting time	

II. SAFEGUARDS COMPLIANCE STATUS

A. Compliance of Safeguard Loan Covenants

12. The loan agreement for DWSNIP was signed on 17th July 2016 between PEOPLE'S REPUBLIC OF BANGLADESH ("Borrower") and ASIAN DEVELOPMENT BANK ("ADB"). Table 3 provides a summary of compliance to the loan covenants related to environmental Safeguards.

Table 3: Compliance of Loan Covenants- Environment Part

Loan agreement schedule and Program Specific Covenants	Status / Issues
Procurement of Goods, Works and Consulting Services	
Loan Agreement Schedule 4 Item 7 **Conditions of Works' Commencement:** DWASA shall issue a notice to commence Works after having clearance from DOE: (a) Any Work involves with environmental impacts shall be granted with the DoE-approval in IEE (b) Incorporated the relevant provisions from the EMP into the Works contract	DWASA obtained Environmental clearance certificate for DWSNIP-subprojects from Department of Environment on June 12, 2019. Incorporated EMP into the Civil works contract for ICB 2.8, ICB 2.9, ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1&2), NCB 2.12A, NCB 2.12B, NCB 2.12C, NCB 2.12D and NCB 2.12E
Safeguards Environment	
Loan Agreement Schedule 5 Item 5 **Conditions of Works' Commencement** The Borrower shall ensure or cause the DWASA to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project, and all projects' facilities comply with all applicable laws and regulations of the Borrower relating to environment, health, and safety; Measures and requirements set forth in the EMP, including corrective measures against any impact that occurs during implementation	IEE reports are with the Environmental Management Plan which describes the specific activities to be performed in preparation and design phases including in operation phases. All the anticipated impacts were identified and mitigation measures were included in the IEE/EIA reports The DoE agreed and issued the environmental clearance certificates before commencement of works. All measures and requirements as prescribed in IEE/EIA and EMP is considered during implementation. Civil works has started for all awarded packages.
Human and Financial Resources to Implement Safeguards Requirements	
Loan Agreement; Schedule 5 Item 9 **Conditions of Works' Commencement** The Borrower shall make available, or cause the DWASA to make available, all necessary budgetary and human resources to fully implement the EMP required.	All the Environment and Social safeguard positions in the PMU and DMSC including the Safeguard People under each package has been ensured before commencement of works.
Safeguards - Related Provisions in Bidding Documents and Works Contracts	
Loan Agreement Schedule 5 Item 10 **Conditions of Works' Commencement** The Borrower shall ensure, or cause the DWASA to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures against each item of EMP, and the final RP (to the extent they concern impacts on affected people during construction), and any corrective or	**Complied** (a) All the anticipated measures were included in the EMPs those were included in the EIA report of DOE and updated IEE reports and approval obtained from DOE and ADB. All the measures were included in the bidding documents. (b) Included in Section 8: Special Conditions of the Contract, Item 47

Loan agreement schedule and Program Specific Covenants	Status / Issues
preventative actions set forth in a Safeguards Monitoring Report; (b) make available a budget for all such environmental measures; (c) provide the Borrower with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks 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.	(c) Included in Section 8: Special Conditions of the Contract, Item 22.1.2 (d) Included in Section 8: Special Conditions of the Contract, Item 21.1. (e) Included in Section 8: Special Conditions of the Contract, Item 24.9
Safeguards Monitoring and Reporting	
Loan Agreement Schedule 5 Item 11 **Conditions of Works' Commencement** The Borrower shall cause the DWASA 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; and (c) Report any actual or potential breach of compliance with the measures and requirements set forth in the EMP, and the RP promptly after becoming aware of the breach.	(a) Being complied with this is 12th Semi-annual safeguard monitoring on Environment for the period July-December, 2023. The previous SEMR were "recorded as "submitted" and disclosed on ADB/DWASA website https://www.adb.org/sites/default/files/project-documents/47254/47254-003-emr-en_15.pdf All other previous SEMRs were also approved and recorded in ADB/DWASA website. (b) and (c) Complied The requirement to report any unanticipated environmental impacts with detailed propose correction action is included in the SEMR template.
Prohibited List of Investments *(Safeguards Covenant)*	
Loan Agreement Schedule 5 Item 12 **Conditions of Works' Commencement** The Borrower shall ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	**Complied** The condition is included in the Project Administration Manual (PAM) and the possibility of such happening is nil.

Labor Standards Health and Safety	
Loan Agreement Schedule 5 Item 13 **Conditions of Works' Commencement** The Borrower shall ensure that core labor standards and the Borrower's applicable laws and regulations are compiled during project implementation. The borrower shall include specific provisions in the bidding documents and contracts financed by ADB that the contractors shall; (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) not use child labor; (c) not discriminate workers in respect of employment and occupation; (d) 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, formation on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women. The Borrower shall strictly monitor compliance with the requirements set forth above and provide ADB with regular reports	**Complied in document and to be complied during implementation** Provision is included (as per EMP & BID document) to carry out HIV/AIDS awareness programs for construction contractor, application of all relevant labour laws for health and safety including child labour law and engagement of local labors (preferably from economically backward group) covering women labors. In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken. All activities including awareness program is reflected in "Monitoring Report". Civil works contractor (ICB 2.8, 2.9, 2.10 and 2.11 prepared Health and Safety Plan in response to COVID 19 pandemic and approved by PMU as well as ADB.

Table: Implementation status of CAP recommended by ADB review mission

Sl.	Recommended Corrective Action Measures	July-December, 2023	Implementation Status	Remarks
1	The Mission discussed construction related other issues and concerns, particularly dust problem, uncovered trenches following pipe installation, excavated soil, and inadequate traffic signage raised by local community during the stakeholder consultation and advised to take measures to improve the situation by the contractor.	During this period	Mitigation measures have been taken on regular basis; spraying water and covering soil to mitigate dust problems, covering trenches during pipe installations, removing excavated soils, placing traffic signage practicing by contractor	
2	**Preparation of IEE**. The Mission also discussed about 5 NCB 2.12 packages IEE report		IEE of NCB 2.12A, NCB 2.12D and 2.12E are submitted to ADB and these are under review. And 2.12B, 2.12C will be submitted by 15th January, 2024 as promised.	

	(iii) continuation of the environmental quality monitoring for the remaining DMAs,		Continuation ongoing of the environmental quality monitoring for the remaining DMAs.	
	(iv) timely submission of SEMRS, and		Timely submitting of SEMRs	
	(v) continue capacity building sessions for construction workers to raise awareness on OHS.		Continuation ongoing for capacity building sessions for construction workers to raise awareness on OHS by trainings and toolbox meetings	

B. Compliance status with National/Local statutory environmental requirements with Environmental Statutory Clearance

13. Before implementation of the project, compliance with environmental policy, law and legislation is necessary.

14. DWASA with the assistance of the consultant teams, has prepared EIA Report and submitted to DoE and presentation on EIA report has done at DoE office on April 1, 2019. PMU submitted revised EIA report to DoE incorporating all comments and got Environmental Clearance Certificate on June 12, 2019. DoE issued 1st ECC renewal on August 18, 2020 which is valid until June 12, 2021, 2nd ECC renewal on June 30, 2021 which is valid until June 12, 2022 and 3rd ECC renewal on July 24, 2022 which is valid until June 12, 2023. 4th ECC renewal on November 14, 2023 which is valid until June 12, 2024. **(please refer to Annex-3 for ECC from DOE**).

15. Under DWSNIP present status of relevant permits and statutory clearance are mentioned in Table 4 on next page.

Table 4: Status of Permit and Statutory Clearance (till reporting period)

ICB & NCB packages	Compliances	Status
ICB-2.08: Batch-1, 2, 3 & 4	Environmental clearance from DOE	Obtained for all batches
	Updated IEE – approved by ADB	Done for all Batches
	Road cutting permission from City Corporation	Road cutting permission obtained for all DMAs
	Utility services – identification and measures accordingly (Gas Line, Electricity, Sewerage line etc.)	Well-identified before construction work started.
ICB-2.09: Batch-1,2,3,4	Environmental clearance from DOE	Obtained for all batches
	Updated IEE – approved by ADB	Done for all Batches
	Road cutting permission from City Corporation	Road cutting permission obtained for all DMAs.
	Utility services – identification and measures accordingly	Well-identified before construction work started.
ICB-2.10: Batch-1,2,3,4	Environmental clearance from DOE	Obtained for all batches
	Updated IEE – approved by ADB	1st, 2nd and 3rd batches – Approved, 4th batch preparation on process.
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.11A	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.11B	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.11C; L-1	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.11C; L-2	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and	Identify the all utility before starting of

	measures accordingly	work
NCB 2.11D; L-1	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.11D, L-2	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Approved
	Road cutting permission from City Corporation	Pipe Installation is done only after having road cutting permission
	Utility services – identification and measures accordingly	Identify the all utility before starting of work
NCB 2.12A	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Submitted
	Road cutting permission from City Corporation	Construction work yet to be started
	Utility services – identification and measures accordingly	Construction work yet to be started
NCB 2.12B	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Not yet submitted
	Road cutting permission from City Corporation	Construction work yet to be started
	Utility services – identification and measures accordingly	Construction work yet to be started
NCB 2.12C	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Not yet submitted
	Road cutting permission from City Corporation	Construction work yet to be started
	Utility services – identification and measures accordingly	Construction work yet to be started
NCB 2.12D	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Submitted
	Road cutting permission from City Corporation	Construction work yet to be started
	Utility services – identification and measures accordingly	Construction work yet to be started
NCB 2.12E	Environmental clearance from DOE	Environmental clearances obtained from DOE
	Updated IEE – approved by ADB	Submitted to PMU
	Road cutting permission from City Corporation	Construction work yet to be started
	Utility services – identification and measures accordingly	Construction work yet to be started

C. Implementation Arrangements

16. The PMU have a Safeguard Implementation Unit (SIU) staffed with three officers - 1 Environmental Officer, 1 Social Officer, and 1 Gender Officer - at executive engineer level. The SIU has been assisted by relevant safeguard specialists in the DMS teams to implement safeguards.

17. The responsibilities of the Environmental Officer of SIU ensure that (i) environmental safeguard issues are addressed; (ii) EMP/approved SEP is implemented; (iii) physical and non-physical activities under the subproject are monitored; and (iv) monitoring reports are prepared on time and submitted to ADB.

18. PMU has been supported by the Design Management and Supervision Consultants (DMS). An Environment Specialist has been engaged to ensure: (i) EMP/ approved SEP is implemented; (ii) surveys and measurements are undertaken; (iii) inspections and observations throughout the construction period are recorded to ensure that safeguards and mitigation measures are provided as intended; and (iv) statutory clearances and permits from government agencies/other entities are obtained prior to start of civil works.

19. Project coordination unit (PCU) in each zone (zone 1,2,3,4,7,9,10), headed by an executive engineer, are responsible for liaising and coordinating with the contractors, DMS, NGO and other stakeholders on all day-to-day implementation of distribution network improvement work under the project.

20. The three (3) safeguards experts were hired in the PMU; seven (7) executive engineers were hired in the project coordination unit (PCU) and DMS Environmental Specialist, Resettlement Specialist, Social Development/Gender Expert and Environmental Inspector has already been mobilized. Table 5 shows detail of safeguards Team and Figure 2 shows the status of permit and statutory clearance for DWSNIP till this reporting period.

Table 5: Safeguards Team

Name	Designation/Office	Email Address	Contact Number
PMU			
1. Jeni Chakma	Executive Engineer (Environmental Expert in charge)	tongla11@yahoo.com	+8801553266545
2. Sharmin Haque Amir	Executive Engineer (Resettlement Expert in charge)	sharmine.amir@gmail.com	+880171502568
3. Sazia Afrin	Executive Engineer (Gender Expert in charge)	Sazia004@gmail.com	+8801716332483
PCUs			
1. Md. Mujahidur Rahman	Executive Engineer MODS Zone-9 (ICB 2.8)	Mujahid_buet@yahoo.com	+8801723944481
2. Md. Firoz Alom	Executive Engineer MODS Zone-2 (ICB 2.9)	firoz.alom_dw@yahoo.com	+8801819229415
3. Md. Al Amin	Executive Engineer MODS Zone-1 (ICB 2.10)	m.alamin.dwasa@gmail.com	+8801819229419
4. Jayanta Saha	Executive Engineer MODS Zone-3 (ICB 2.11)	jayanta2k7@gmail.com	+8801819229418
5. Md. Mazharul Islam	Executive Engineer MODS Zone-4 (ICB 2.11)	marufdwasaz9@gmail.com	+8801819229417
6. Md. Ashraful Habib, Choudury	Executive Engineer MODS Zone-10 (ICB 2.11)	ashraf9910127@gmail.com	+880181714495
7. Md. Shah Alam	Executive Engineer MODS Zone-7 (ICB 2.12)	abid310@gmail.com	+8801763051234
DMS Consultants			
1. Md. Emdadul Haque Bhuiyan	Resettlement Specialist	rse.dms@dwsnip.com	+8801715005682
2. Abdus Samad	Social Development/Gender Expert	Samad3364@gmail.com	+8801718644317
3. Jannatul Ferdous Barsha	Environmental Inspector	engr.barsha12@gmail.com	+8801755388383

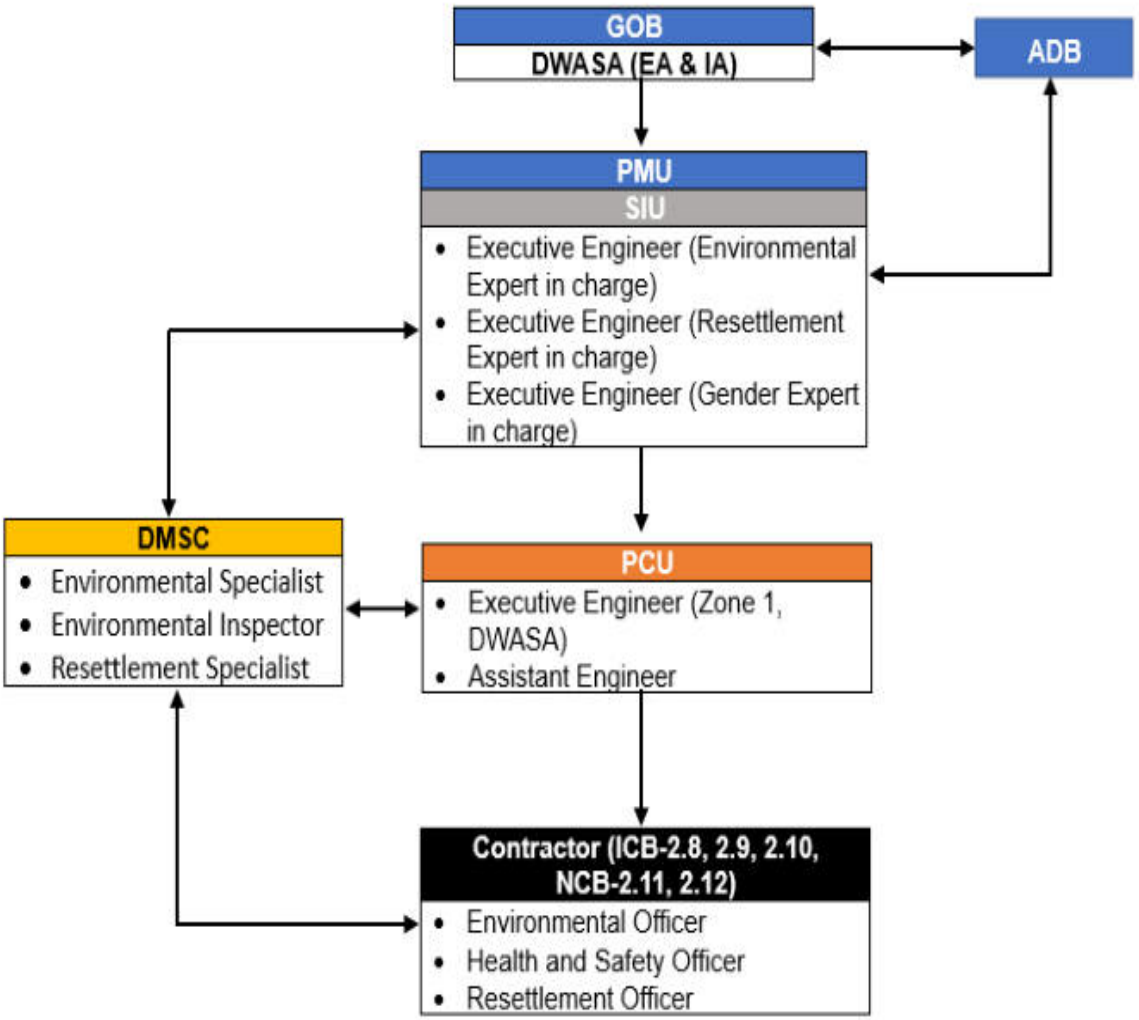


Figure 2: Safeguard Implementation Arrangements

21. The Contractor is responsible for the following activities:

(i) Submitting the Site environmental plan (SEP) for the proposed sites/locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes

(ii) Complying with all applicable legislations and requirements of the approved SEP;

(iii) Briefing the staff, employees, and laborer about the requirements of the EMP/ approved SEP;

(iv) Ensuring the sub-contractors and suppliers engaged in the works to comply with the environmental requirements as per EMP/SEP because the Contractor is held responsible for non-compliance on sub-contractors' behalf;

(v) Supply method statements for all activities requiring special attention as specified and/or requested by the DMS Environmental team during Contract period;

(vi) Provide environmental awareness training to staff, employees, and laborers;

(vii) Bear the costs of any damages/compensation resulting from non-adherence to the

EMP/ approved SEP or written site instructions;

(viii) Conduct all activities in a manner that minimizes disturbance to directly affected residents and the public in general, and foreseeable impacts on the environment.

(ix) Ensure that the PMU Environment Officers are timely informed of any foreseeable activities that requires input from the DMS Environmental Team.

22. During reporting period, all awarded civil contract packages were mobilized Environment, Resettlement and Health and safety Officers for implementation of EMP during works implementation. The details are as follows:

Table 6: Contractor's EHS Personnel

Name	Designation	Contact no.
ICB 2.10		
Md. Sharif Ullah	Resettlement officer	01844659354
Farzana Islam Khan	Environmental Engineer	01847468487
Md. Shakil Mridha	Health and Safety officer	0189495759
Sujhon Chandra Saha	Health and Safety officer	01844665664
Istiak Arifin Hridoy	Health and Safety officer	01844606173
Anas Ahmmed Shuva	Health and Safety officer	01844664699
Md. Tanvir Hossain	Health and Safety officer	01844200375
Md. Sabbir Hossain	Health and Safety officer	01844664160
Parag Rana Partho	Health and Safety officer	01896007301
NCB 2.11A		
Md. Emon Afroj	Health and Safety officer	01925155247
Md. Anower Hossain	Resettlement officer	01678224507
Md. Jakirul Islam	Resettlement officer	01844664699
Md. Suruj Mia	Health and Safety officer	01710738031
Md. Rabiul Islam	Environmental Engineer	01678224521
Sujhon Chandra Saha	Safety officer	01844665664
NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1)		
Md. Kauser Hossen	QHSE Manager	01844665521
Abu Hayat Ben Zakaria	Deputy Environment Manager	01746505906
Md. Saiful Islam	QHSE In-charge	01844664558
Sayedur Rahman	HSE Engineer	01704132779
Sujoy Kumar	HSE Engineer	01704132899
Shamim Rahman	HSE Engineer	01755346743
NCB 2.11D (Lot-2)		
Md. Anwarul Iqbal	Environmental Officer	01552647937
Debomay Mondal	Resettlement Officer	01304354710
Md. Ruhul Amin	Health & Safety Officer	01709388511
Md. Shah Alom	Health & Safety Officer	01711616301
Md. Barkat	Traffic control officer	01718277591
Md. Sujan Miah	Traffic control supervisor	01711616301
Md Ashraful	Traffic control supervisor	01823557327

23. **Reporting Arrangement.** Contractor of each ongoing package monitored safeguard **i**mplementation on daily basis, while DMS team reviewed safeguard implementation weekly. The Environmental Team of DMSC, after reviewing, advised contractor for corrective measures. Monthly report summarizing observation, compliance and corrective measures were prepared by Environmental Officer of Contractor. Quarterly monitoring report was prepared by the DMS Consultants on performance of contractors on EMP implementation. Then reports were forwarded to PMU from DMSC for observation, review and record. Based on monthly and quarterly reports and site observations, PMU through the support from DMS Consultants reviewed and consolidated the semi-annual environment monitoring report for submission to ADB.

III. ENVIRONMENTAL MANAGEMENT AND MONITORING COMPLIANCES

24. This section presents the compliance status of Environmental Management and Monitoring Plans of DWSNIP subprojects under 3-ICB packages and 6-NCB packages with implementation and rehabilitation of different activities mentioned below:

Table 7: Implementation and rehabilitation of different activities

Work packages	Concerned DMAs	Interventions as per Bid Document		
		Pipeline (Km)	House Connection (no.)	DTW (no.)
ICB 2.08	DMA 903, DMA 904, DMA 906, DMA 907, DMA 905, DMA 908, DMA 912, DMA 913, DMA 915, DMA 911, DMA 902, DMA 901, DMA 914, DMA 908	455.8	30,945	63
ICB 2.09	DMA 201, DMA 202, DMA 203, DMA 204A, DMA 204B, DMA 205, DMA 206, DMA 207, DMA 208A, DMA 208B, DMA 209A, DMA 209B, DMA 210A, DMA 210B, DMA 211, DMA 212, DMA 213, DMA 214 and DMA 215	266.23	31,860	58
ICB 2.10	DMA 101, DMA 105, DMA 108B, DMA 102, DMA 103, DMA 106, DMA 104, DMA 110, DMA 118, DMA 119, DMA 109A, DMA 109B, DMA 111, DMA 112, DMA 117	341.5	39067	75
NCB 2.11A	DMA 301, DMA 303, DMA 306, DMA 311, DMA 320, DMA 408	25	7500	30
NCB 2.11B	DMA 305, DMA 307, DMA 312, DMA 313	94.79	7,977	28
NCB 2.11C Lot 1	DMA 406, DMA 411, DMA 412	68.84	7,154	20
NCB 2.11C Lot 2	DMA 409, DMA 413, DMA 414	66.67	7,044	16
NCB 2.11D Lot 1	DMA 1005, DMA 1010, DMA 1011	66.80	8,567	18
NCB 2.11D Lot 2	DMA 1001 & DMA 1009	48.36	5712	12

25. The site inspections, for EMP compliances, were conducted on regular basis by the Assistant Resident Engineers/ Sub Assistant Resident Engineers of DMSC. Joint meetings among the PMU-PCU, DMSC and Contractors were organized whenever the environmental and safety issues were identified, and corrective actions were requested.

26. For implementation of EMP, arrangement of human safety, provision of PPE for workers engaged in construction is being implemented. Trainings were provided to the contractor by DMSC's Environmental Team. Moreover, instruction was given to contractors to follow the specified clause of BID document to mitigate environmental and social impacts.

27. Construction site monitoring is a continuous process. All ongoing construction sites of ICB 2.08, ICB 2.09, ICB 2.10 and NCB (2.11A to 2.11D, 2.6) are monitored on a daily basis by contractors EHS team as well as assistant resident engineer/sub assistant resident engineer of DMSC to make sure the contractors are compliant according to their respective EMP. In addition to that Joint site inspections of the PMU-PCU, DMSC and contractors are conducted to evaluate the same. The summary of site visits is listed in the following table.

Table: Environment and Safety Monitoring Activities

Mission/Task	**Date**	**Location of Site Visits/DMA**	**Conducted by Whom**
Monitoring on Contractor's EMP compliance	Daily	All ongoing construction sites of ICB 2.10, NCB 2.11 Packages.	Assistant Resident Engineer/Sub Assistant Resident Engineer of DMSC
Monitoring on EMP implementation and compliance for Semi-annual Environmental Report	**ICB 2.10**		Joint site inspections of the PMU-PCU, DMSC and Contractors
	11.07.2023 &17.07.2023	DMA 108A, DMA 103	
	13.08.2023	DMA 108A	
	10.09.2023	DMA 107	
	NCB 2.11A		
	15.08.2023 & 22.08.2023	DMA 303, DMA 305	
	24.09.2023	DMA 420	
	05.10.2023	DMA 306	
	NCB 2.11B		
	17.09.2023	DMA 313	
	10.10.2023	DMA 313	
	02.11.2023	DMA 312 & DMA 313	
	12.12.2023	DMA 307	
	NCB 2.11C Lot-1		
	09.10.2023	DMA 411	
	09.11.2023	DMA 412	
	NCB 2.11C Lot-2		
	19.12.2023	DMA413	
	NCB 2.11D Lot-2		
	10.10.2023	DMA 1001	
	16.11.2023	DMA 1009	

28. Observation regarding Environmental Condition at different DMA sites due to construction work activities are as follows:

29. Safeguard Compliances under ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1&2)

ICB 2.10

- Water spraying was done regularly.
- Excavated materials were removed from the construction site immediately.
- Emergency contact details was also available on the site
- Temperature screening facility, first aid box, hand washing facilities were available on the site

NCB 2.11A

- Traffic signage (Signs, Pavement Markings, Arrow Panels, Warning Lights) was visible
- Occupational health and safety trainings are provided regularly.
- Stockpiles of sand and excavated soil were not covered and transported to disposal site.

NCB 2.11B

- First Aid Box, fire extinguisher, drinking water for workers and Help Desk were available in the site.
- Traffic signage (Signs, Pavement Markings, Arrow Panels, Warning Lights) were sufficient
- Workers were reluctant to wear face masks
- Posters or signages regarding COVID 19 prevention measures were missing in and around the construction sites.

NCB 2.11C Lot-1

- First Aid Box, fire extinguisher, drinking water for workers and help desk were available in all of the sites
- Traffic signage (Signs, Pavement Markings, Arrow Panels, Warning Lights) was insufficient.
- Occupational health and safety trainings are provided irregularly.
- Traffic Flagman/Traffic controller was not available on construction site.

NCB 2.11D Lot-2

- First Aid Box, fire extinguisher, drinking water for workers and help desk were available in all of the sites
- Traffic signage (Signs, Pavement Markings, Arrow Panels, Warning Lights) was sufficient.
- Traffic Flagman/Traffic controller was not available on construction site.

30. Compliance to EMP for the Package ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2) and NCB 2.11D (Lot-1&2)

Proper measures were undertaken during planning, design and implementation phases including measures during operation phases were maintained in all packages. In the reporting period; works were running under ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2) and NCB 2.11D (Lot-1&2). The implementation status of DWSNIP interventions has been illustrated in table-1 and table 2-A. Implementation of EMP as well as to follow the

safeguard compliances were followed in all the DMAs under ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2) and NCB 2.11D (Lot-1&2) packages. A sample safeguards compliance status under both packages are illustrated in the table:

Table: Compliance to EMP for the Package ICB 2.10, NCB 2.11A, NCB 2.11B, NCB 2.11C (Lot-1&2) and NCB 2.11D (Lot-1&2) (all running DMAs)

Activity	Mitigation Measures	Responsible for		Parameter to Monitor	Frequency of Monitoring	Location	Compliance Status
		Implementation	Monitoring				
Planning, Design and Operation Stages							
Contractor's Responsibility	• Familiar with traffic system, rules and regulation of Dhaka City and road cutting plans before works; • Arrangement of temporary water supply to meet any disturbance of water supply during works • Protect all utility services from damage during works • Road survey, existing utility services were recorded.	Contractor	DMS/ PCU/ PMU	Road cutting plan Arrangement for temporary water supply Precaution for utilities around	As required in the program of performance	N/A	• The Contractor prepared road cutting plans for all DMAs. • Temporary water supply arrangement made for the disconnected HH from the regular water supply. • Shifting of any utility was not required and all damages has been repaired.
Earth filling after pipe laying works (minimum depth of filling	Ensuring 1.0 m soil cover either in trench cutting or open cut after pipe laying	Contractor	DMS/ PCU/ PMU	Residual design life and proposed method of repair	As required in the program of performance	Each DMA sites	Maintained minimum coverage 1 m after pipe laying
Working hours and times	Work at night in heavy traffic road 7pm-7am and working in day time roads with less traffic volume	Contractor	DMS/ PCU/ PMU	Work hours	As required in the program of performance	Each DMA sites	Timing maintained properly and extra precautions maintained with some diversion in some places

Activity	Mitigation Measures	Responsible for		Parameter to Monitor	Frequency of Monitoring	Location	Compliance Status
		Implementation	Monitoring				
Road Crossing	Trenchless method used on roads with heavy traffic and open cut method for narrow roads Horizontal Drilling (HDD) method done taking care to other utilities	Contractor	DMS/ PCU/ PMU	Construction method statement	Construction method of statement	Each DMA sites	About 22% pipeline installed through open trench method
Road Cutting	Safeguard arrangement for utility services around Preventive measures to avoid accident Traffic management plan with planning of road signage and diversion arrangement	Contractors prepared and applied for road cutting permission from DCC and works started after permission from DCC	DMS/ PMU	• Road category along pipe alignments • Road Cutting Plan & Road cutting permission from DCC	Prior to start works (trial pit and layout of pipes)	Each DMA sites	Ensured road cutting permit prior to works. Numbers of Road Blocker, safety items, Divider, Cones and other items were used at worksite.
Road Excavation	Excavation width was maintained with minimum dimension The excavation carried out in quicker mode to avoid sufferings All excavations were with precaution to avoid structure-damage or to other utilities	Contractors for preparation of road cutting plan, application for permission, and payment for pavement restoration	DMS/ PMU	Road category along pipe alignments Budget allocation for pavement restoration Road Cutting Plan Road cutting permission from DCC	Prior to start of works (trial pit and layour of pipes)	Each DMA sites	Long waiting period for road cutting permission from DCC is hampering the progress The Flag man with a road supervisor worked for traffic diversion where required
Trench-less pipe installation	Removal of excavated soil Erosion control measures	Contractor	DMS/ PMU	Program of Performance Planning for pipe laying	As required in the program of performance	Each DMA sites	Trenchless method followed for busy roads and open cut followed

Activity	Mitigation Measures	Responsible for		Parameter to Monitor	Frequency of Monitoring	Location	Compliance Status
		Implementation	Monitoring				
	Cleanup and restoration after work			Plan for notification during trench Traffic Management Plan			for narrow roads where trenchless is not possible
Preparation of catalogues, installation and O&M manuals	The contractor should supply catalogues and installation manuals for each type of pipes to DWASA at the time of submission the Operation and Maintenance manuals (both in Bangla and English)	Contractor	PMU/ DMS	Program of Performance	Completion of civil works and decommissioning	N/A	O&M manuals prepared after completion of works (during handing over to DWASA)

Planning and Design Stage

31. Contractor's Responsibility (under supervision of DMS, PCU & PMU) is to be familiar with the present traffic congestion of Dhaka city, rules and regulation of City Corporation for the preparation of road cutting plans before execution of works; to arrange for temporary water supply to the households to meet up the disturbances during pipeline rehabilitation works; to conserve all existing utility services around construction works; to pay necessary compensation to the affected persons and to conduct surveys (existing pipelines, house connection, utility services etc.) prior to complete detail design.

- The Contractor prepared road cutting plans for all DMAs.
- Temporary water supply arrangement is made to the households disconnected from the regular water supply.
- Shifting of utility was not required. Compensation was given for repair etc. required for the utility services.

Pipe line rehabilitation and installation

32. The network expansion, in the residential/industrial areas, was done through trenchless or conventional trenching methods whereby the pipelines were laid with a minimum cover depth of 1.0 meters. Maintaining minimum coverage 1.00 m for all the pipes installation other than utility Ground problems areas.

Working hours and times

33. All works in major and minor roads with heavy traffic volume, were executed at night time (7pm-7am). In the minor roads with lower traffic volume, works were done during day time (except some works at night time). Alternative passageways were provided for allowing easy movement of vehicles & people. With some exceptions, working hours were maintained

except places where works were allowed at night time.

34. Trenchless Technology was designed for crossing through the busy traffic roads and open trenches were followed for crossing roads with less traffic. Horizontal Directional Drilling (HDD) method was followed after ensuring no disturbance of utilities is there on the way of drilling equipment. About 22% pipeline was installed through open trench method

For pipeline rehabilitation and installation;

- Trenches were with minimum dimension.
- Safety measures for the excavation works were taken
- Safety measures were taken for preserving surrounding service facilities around
- Proper traffic signage was kept in line with traffic and walkers' movements

35. Preparation of catalogues, installation and O&M manuals (pipelines, safety valves, wash out, pump houses etc.) and all the manuals (English and Bangla version) are prepared and in the progress of preparation and those are to be supplied during handing over to DWASA.

36. Proper storage facilities for the construction works. Asbestos Cement Pipes were well located and well planned for careful installation of pipelines besides the AC pipes.

37. During installation of pipelines, proper measures to be taken to conserve surrounding environment, the environmental parameters (air, water and noise). Measures were taken to control pollution of surrounding water around the sites.

38. Proper site selection and construction of labor camp with suitable facilities for laborers. Proper handling of all excavated materials. Avoid all type of public disturbances during installation of pipelines and other interventions. Maintaining water supply undisturbed during installation of pipelines and other interventions.

39. Proper measures to protect trees and vegetation around handling of traffic and access during construction works Measures were taken to minimize noise level. Dust was suppressed through spraying water during excavation works.

40. Measures were taken to protect and facilities and locations of social and cultural importance (hot spots). Measures were taken to comply with occupational health and safety including measures to combat COVID19 situation.

41. After completion of works, the measures were taken like;

- All the excavated roads were reinstated to original condition,
- All disrupted utilities were restored to original condition
- All affected structures were rehabilitated/compensated
- Labor camp and storage areas were cleaned to original landscape
- Ensure leak detection and restoration (in case) to ensure safe water distribution

Table 8: Corrective Action Measures during Reporting Period

Problems found	Measures undertaken to enhance the situation	Timeline
1. Dust / Air pollution control with water spraying by water Bowser		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites.
2. Removing of excavated materials from site simultaneously with the excavation using skid street loader, dump / unloading truck		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites
3. Placing of Road cone, barrier, sign boards and other safety measures are taken while working on site.		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites

Problems found	Measures undertaken to enhance the situation	Timeline
5. Supplying water in the mobile toilet and also provided separate mobile toilet for male and female with sign language		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites
6. Removing rubbish by female labors		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites
7. After completing the work,the backfilling has been done		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites

Problems found	Measures undertaken to enhance the situation	Timeline
8. Mild steel plates are using as a cover of open pit		Correction for any irregularity found during site visits by ADB, DWASA, PMU, NGO, DMSC etc. were done and made it mandatory at the working sites

IV. ENVIRONMENTAL MONITORING AND EVALUATION

42. In addition to desk reviews and site inspections, monitoring of selected environmental parameters has been conducted during the reporting period. Before the start of project activities baseline monitoring is being done in each Package at prominent locations identified in updated IEE to access the initial conditions of environment in the DMA areas. During construction phase, monitoring for ambient environmental conditions (air, noise and water) is conducted on quarterly duration on the locations identified in IEE/EMP. During site visit if any other requirement for environmental monitoring is found, which is not identified in IEE/EMP, the contractor is required to do monitoring after approval of PMU. Monitoring results are compared from baseline data and/or project standards and if unacceptable deviation is found, mitigation measures are prepared by Environmental team of DMSC and conveyed to contractor for compliance.

43. Air quality monitoring results for all DMAs are shown in **Table 9** at the following page.

44. It is ensured that all engaging laboratories who are conducting air, noise and water quality, are following internationally accepted sampling protocol and analysis. PMU through DMSC has already instructed all contactors to select such laboratories who will maintain international protocol for sampling and analysis environmental quality parameters.

45. Salient findings from air quality monitoring are as follows,

Table -9: Ambient Air Quality Monitoring Data

Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Parameters (Monitoring Results)				
					PM_{10} µg/m3	$PM_{2.5}$ µg/m3	SO_2 µg/m3	NO_2 µg/m3	CO ppm
National Standards of Ambient Air Quality*					**150**	**65**	**250**	**80**	**5**
ICB 2.10	DMA 107	During Construction	01.10.2023	Haider Ali School & College, Manda Bridge, Dhaka GPS Location:23° 43' 44.4"N 90° 26'7.83"	103	52	27	21	1.4
				Kadam Ali Jheelpar Road, Manda Road GPS Location: 23° 43' 50.56"N 90° 26' 28.45"E	95	49	24	19	0.9
				Madrasha Bahrul Ulum, Manda Shes Bridge, Dhaka GPS Location: 23° 43' 51.42"N 90° 26' 45.78"E	84	41	22	20	0.8
	DMA 110	During Construction	14.12.2023	Maniknagar Bus Stop, Ram Krishna Mission Road, Dhaka GPS Location: 23° 43' 19.96"N 90° 25' 43.31"E	152	81	67	52	2.5
				Maniknagar Wasa Road GPS Location: 23° 43' 31.10"N 90° 26' 01.50"E	93	54	35	23	0.9
				Maniknagar Balur Math Panir Pump at East Maniknagar, Mugda GPS Location: 23° 43' 31.00"N 90° 26' 14.50"E	81	42	27	16	0.7
	DMA 117	Baseline	18.12.2023	Near Gendaria Police station; 53, K.B. Road, Mill Barrack GPS Location: 23°41'59"N	124	53	31	26	1.2

Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Parameters (Monitoring Results)				
					PM_{10} µg/m3	$PM_{2.5}$ µg/m3	SO_2 µg/m3	NO_2 µg/m3	CO ppm
National Standards of Ambient Air Quality*					**150**	**65**	**250**	**80**	**5**
				90°25'15"E					
				Bank of Gendaria DIT Pond, Dhaka GPS Location: 23°42'01"N 90°25'42"E	104	41	24	18	0.8
				Beside Al Amin Mosque, Gendaria, Dhaka GPS Location: 23°41'46"N 90°25'27"E	87	42	24	19	0.8
	DMA 119	During Construction	14.12.2023	Near Postogola Fire Service Station at MC Road, Postogola, Shampur, Dhaka GPS Location: 23° 41' 27.56"N 90° 25' 50.01"E	145	78	59	62	2.3
				Near Janata Bank Ltd at 215, Karim Ullarbag,Postagola, Smashanghat Road, Dhaka GPS Location: 23° 41' 33.83"N 90° 25' 39.55"E	142	69	55	52	2.5
				Near Jurain Labur Kachabazr at 74/D IT Plot, Balurmath, Postogola, Jurain, Dhaka GPS Location: 23° 41' 39.08"N 90° 25' 58.11"E	147	73	48	43	2.1
NCB 2.11A	DMA 306	During Construction	25.07.2023	Physical College Road, Mohammadpur 23°45'12.8"N 90°21'52.1"E	45.54	25.32	8.44	16.20	0.14
				Kazi Nazrul Islam Road, Mohammadpur 23°45'20.5"N 90°21'51.5"E	45.50	25.38	8.49	17.00	0.14

Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Parameters (Monitoring Results)				
					PM_{10} µg/m3	$PM_{2.5}$ µg/m3	SO_2 µg/m3	NO_2 µg/m3	CO ppm
National Standards of Ambient Air Quality*					**150**	**65**	**250**	**80**	**5**
	DMA 301	During Construction	25.07.2023	Shekhertek Road 07, Adabar 23°46'15.5"N 90°21'19.1"E	50.55	31.22	9.25	18.22	0.14
				Shekhertek Road 10, Adabar 23°46'20.2"N 90°21'17.6"E	50.50	31.20	9.38	17.99	0.15
	DMA 408	During Construction	01.12.2023	Near Mollapara, GPS Location: 23°47'02.6"N 90°22'25.3"E	130	70	60	40	2.0
				Mollapara Road, Dhaka GPS Location: 23°47'00.9"N 90°22'36.6"E	155	75	55	41	2.4
	DMA 311	During Construction	01.12.2023	Sher-E Bangla nagar, Dhaka GPS Location: 23°46'12.3"N 90°22'14.5"E	95	47	25	19	1.8
				Location: Bir Uttom Khaled Mosharraf Ave, Dhaka GPS Location: 23°46'14.1"N 90°22'49.0"E	80	44	25	17	0.9
NCB 2.11B	DMA 307	During Construction	01.09.2023	Sampling Location: In front of Dhaka Art College GPS Location: 23° 44' 54.10"N 90° 21' 48.00"E	99	43	25	24	2.2
				Sampling Location: In front of Bangladesh Eye Hospital GPS Location: 23° 45' 06.70"N 90° 22' 02.60"E	103	57	29	19	1.7
NCB 2.11C Lot-1	DMA 406	During Construction	01.09.2023	Sampling Location: Monipur High School & College,	105	55	32	18	1.2

Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Parameters (Monitoring Results)				
					PM_{10} µg/m3	$PM_{2.5}$ µg/m3	SO_2 µg/m3	NO_2 µg/m3	CO ppm
National Standards of Ambient Air Quality*					**150**	**65**	**250**	**80**	**5**
				Ibrahimpur, Shewarapara, Mirpur, Dhaka GPS Location: 23° 48' 1.62"N 90° 21' 57.29"E					
				Sampling Location: Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka GPS Location: 23° 47' 54.16"N 90° 22' 20.17"E	98	44	27	20	2.3
	DMA 411	During Construction	01.09.2023	Sampling Location: Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60 foot road), Mirpur-1, Dhaka GPS Location: 23° 47' 28.00"N 90° 21' 57.40"E	101	51	30	25	1.5
				Sampling Location: Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur GPS Location: 23° 47' 30.30"N 90° 22' 14.00"E	108	46	24	23	2
	DMA 412	During Construction	01.09.2023	DMA-412 Sampling Location: Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur GPS Location: 23° 47' 18.05"N 90° 22' 20.6"E	97	54	28	17	1.1
				DMA-412 Sampling Location: Ali Miar Tek Market,	106	49	33	21	2.4

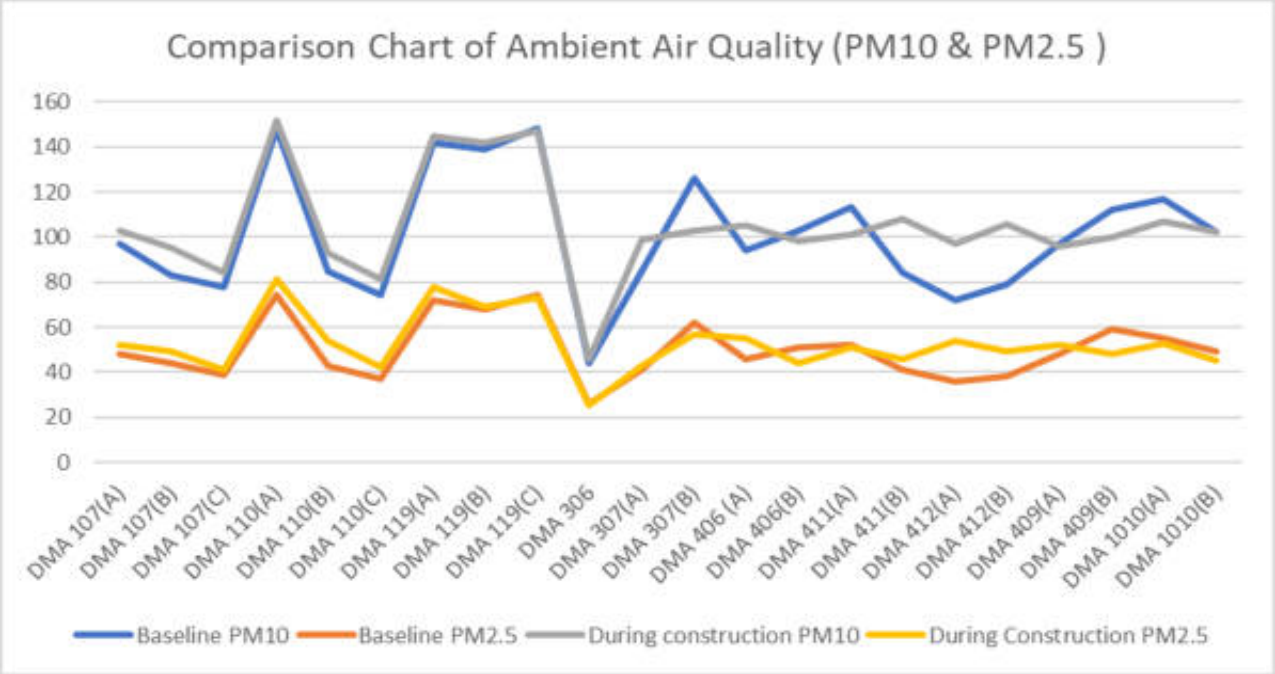
Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Parameters (Monitoring Results)				
					PM_{10} µg/m3	$PM_{2.5}$ µg/m3	SO_2 µg/m3	NO_2 µg/m3	CO ppm
National Standards of Ambient Air Quality*					**150**	**65**	**250**	**80**	**5**
				Pirerbag, West Shewarapara, Mirpur GPS Location: 23° 47' 23.19"N 90° 22' 15.79"E					
NCB 2.11C, Lot-2	DMA 409	During Construction	01.09.2023	Sampling Location: In front of Hazrat Shah Ali Mohila College GPS Location: 23° 47' 48.80"N 90° 20' 59.80"E	96	52	31	26	1
				Sampling Location: In front of Sony Square Star Cineplex GPS Location: 23° 48' 01.40"N 90° 21' 21.40"E	100	48	26	22	2.1
NCB 2.11D, Lot-1	DMA 1010	During Construction	01.09.2023	Sampling Location: In front of Desh Polytechnic College GPS Location: 23° 49' 15.40"N 90° 22' 06.20"E	107	53	23	18	1.3
				Sampling Location: In front of City Club, Pallobi 23° 49' 22.40"N 90° 21' 55.60"E	102	45	34	20	2.5

*The Bangladesh National Ambient Air Quality Standards have been taken from ‘’Air Pollution Control Rules, 2022’’.

46. Findings: The laboratory analysis of ambient air quality shows that air quality parameters concentration of most of the locations were within allowable limits of DoE, Bangladesh. PM10 and PM2.5 value has been exceeded at some locations in all packages but at some location baseline data of PM2.5 and PM10 were already noted with larger values and at some location of during construction data of PM2.5 and PM10 noted with lesser values than baseline data. This is mainly due to emissions from motorized vehicles and other anthropogenic sources (shops, warehouse and plastic factories, vehicular movement etc.) in these areas. To compare the during construction monitoring data with baseline monitoring data there is a table-9A and a graph has been shown in the following pages:

Table -9A: Comparison Table for Ambient Air Quality Monitoring (with Baseline data/previous monitoring data)

Package No.	Name of DMAs	Site Location	Baseline Monitoring		During Construction (July-December, 2023)	
			PM_{10} µg/m3	$PM_{2.5}$ µg/m3	PM_{10} µg/m3	$PM_{2.5}$ µg/m3
National Standards of Ambient Air Quality*			**150**	**65**	**150**	**65**
ICB 2.10	DMA 107	Haider Ali School & College, Manda Bridge,Dhaka	97	48	103	52
		Location: Kadam Ali Jheelpar Road, Manda Road	83	44	95	49
		Location: Madrasha Bahrul Ulum, Manda Shes Bridge,Dhaka	78	39	84	41
	DMA 110	Location: Maniknagar Bus Stop, Ram Krishna Mission Road, Dhaka	148	74	152	81
		Maniknagar Wasa Road	85	43	93	54
		Maniknagar Balur Math Panir Pump at East Maniknagar, Mugda	74	37	81	42
	DMA 119	Near Postogola Fire Service Station at MC Road, Postogola, Shampur,Dhaka	142	72	145	78
		Near Janata Bank Ltd at 215, Karim Ullarbag, Postagola, Smashanghat Road,Dhaka	139	68	142	69
		Location: Near Jurain Labur Kachabazr at 74/D IT Plot,Balurmath, Postogola, Jurain, Dhaka	148	74	147	73
NCB 2.11A	DMA 306	Physical College Road	43.99	26.01	45.54	25.32
NCB 2.11B	DMA 307	In front of Dhaka Art College	85	41	99	43
		In front of Bangladesh Eye Hospital	126	62	103	57
NCB 2.11C, Lot-1	DMA 406	Monipur High School & College, Ibrahimpur, Shewarapara, Mirpur, Dhaka	94	46	105	55
		Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka	103	51	98	44
	DMA 411	Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60-foot road), Mirpur-1, Dhaka	113	52	101	51
		Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur	84	41	108	46
	DMA 412	Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur	72	36	97	54
		Ali Miar Tek Market, Pirerbag, West Shewarapara, Mirpur	79	38	106	49
NCB 2.11C, Lot-2	DMA 409	In front of Hazrat Shah Ali Mohila College	97	48	96	52
		In front of Sony Square Star Cineplex	112	59	100	48
NCB 2.11D, Lot-1	DMA 1010	Sampling Location: In front of Desh Politechnic College	117	55	107	53
		Sampling Location: In front of City Club, Pallobi	102	49	102	45



47. Mitigation measures, like dust suppression was applied as per EMP. Contractors are being advised regularly to take necessary action on dust suppression (during dry periods) by sprinkling of water, covering soil during transportation whenever required. Moreover, aware to contractor and the local communities, applied the following mitigation measures:

- Wearing masks while working in dusty sites.
- Controlled vehicular movement and safe transportation during upload/unload construction materials;
- Regular maintenance of vehicles/equipment's and use of good quality fuel;
- Cover the excavated material and stockpiles and also cover whenever it is transported.

48. Baseline and during construction ambient noise level data are presented in **Table 10**

Table-10: Noise Level Monitoring Data at DMA Sites

Package No.	Name of DMAs	Monitoring Stage	Date of Testing	Site Location	Land use Category	L_{eq} (dBA)	
						Day Time	Night Time
ICB 2.10	DMA 107	During Construction	01.10.2023	Haider Ali School & College, Manda Bridge, Dhaka GPS Location:23° 43' 44.4"N, 90° 26' 7.83"E	Mixed	75	64
				Kadam Ali Jheelpar Road, Manda Road GPS Location:23° 43' 50.56"N, 90° 26' 28.45"E	Mixed	73	67
				Madrasha Bahrul Ulum, Manda Shes Bridge, Dhaka GPS Location:23° 43' 51.42"N, 90° 26' 45.78"E	Mixed	71	61
	DMA 110	During Construction	14.12.2023	Maniknagar Bus Stop, Ram Krishna Mission Road, Dhaka GPS Location: 23° 43' 19.96"N 90° 25' 43.31"E	Residential Area	76	63
				Maniknagar Wasa Road GPS Location: 23° 43' 31.10"N 90° 26' 01.50"E	Residential Area	78	60
				Maniknagar Balur Math Panir Pump at East Maniknagar, Mugda GPS Location: 23° 43' 31.00"N 90° 26' 14.50"E	Residential Area	76	59
	DMA 117	Baseline	18.12.2023	Near Gendaria Police station; 53, K.B. Road, Mill Barrack GPS Location: 23°41'59"N 90°25'15"E	Mixed	73	61
				Bank of Gendaria DIT Pond, Dhaka GPS Location: 23°42'01"N 90°25'42"E	Mixed	68	57
				Beside Al Amin Mosque, Gendaria, Dhaka GPS Location: 23°41'46"N 90°25'27"E	Mixed	71	59
	DMA 119	During Construction	14.12.2023	Near Postogola Fire Service Station at MC Road, Postogola, Shampur, Dhaka GPS Location: 23° 41' 27.56"N 90° 25' 50.01"E	Mixed	74	58
				Near Janata Bank Ltd at 215, Karim Ullarbag,Postagola, Smashanghat Road, Dhaka GPS Location: 23° 41' 33.83"N 90° 25' 39.55"E	Mixed	77	65

				Near Jurain Labur Kachabazr at 74/D IT Plot, Balurmath, Postogola, Jurain, Dhaka GPS Location: 23° 41' 39.08"N 90° 25' 58.11"E	Mixed	74	63
NCB 2.11A	DMA 408	During Construction	01.12.2023	Near Mollapara, GPS Location: 23°47'02.6"N 90°22'25.3"E	Mixed	70	62
				Mollapara Road, Dhaka GPS Location: 23°47'00.9"N 90°22'36.6"E	Mixed	72	60
	DMA 311	During Construction	01.12.2023	Sher-E Bangla nagar, Dhaka GPS Location: 23°46'12.3"N 90°22'14.5"E	Mixed	70	55
				Location: Bir Uttom Khaled Mosharraf Ave, Dhaka GPS Location: 23°46'14.1"N 90°22'49.0"E	Mixed	64	55
NCB 2.11B	DMA 307	During Construction	01.09.2023	Sampling Location: In front of Dhaka Art College GPS Location: 23° 44' 54.10"N 90° 21' 48.00"E	Mixed	69	55
				Sampling Location: In front of Bangladesh Eye Hospital GPS Location: 23° 45' 06.70"N 90° 22' 02.60"E	Mixed	77	61
NCB 2.11C, Lot-1	DMA 406	During Construction	01.09.2023	Sampling Location: Monipur High School & College, Ibrahimpur, Shewarapara, Mirpur, Dhaka GPS Location: 23° 48' 1.62"N 90° 21' 57.29"E	Mixed	65	54
				Sampling Location: Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka GPS Location: 23° 47' 54.16"N 90° 22' 20.17"E	Mixed	72	58
	DMA 411	During Construction	01.09.2023	Sampling Location: Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60 foot road), Mirpur-1, Dhaka GPS Location: 23° 47' 28.00"N 90° 21' 57.40"E	Residential	64	54
				Sampling Location: Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur GPS Location: 23° 47' 30.30"N 90° 22' 14.00"E	Residential	64	51
	DMA 412	During Construction	01.09.2023	Sampling Location: Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur GPS Location: 23° 47' 18.05"N 90° 22' 20.6"E	Commercial	61	49

				Sampling Location: Ali Miar Tek Market, Pirerbag, West Shewarapara, Mirpur GPS Location: 23° 47' 23.19"N 90° 22' 15.79"E	Commercial	64	50
NCB 2.11C, Lot-2	DMA 409	During Construction	01.09.2023	Sampling Location: In front of Hazrat Shah Ali Mohila College GPS Location: 23° 47' 48.80"N 90° 20' 59.80"E	Commercial	72	57
				Sampling Location: In front of Sony Square Star Cineplex GPS Location: 23° 48' 01.40"N 90° 21' 21.40"E	Commercial	73	57
NCB 2.11D, Lot-1	DMA 1010	During Construction	01.09.2023	Sampling Location: In front of Desh Polytechnic College GPS Location: 23° 49' 15.40"N 90° 22' 06.20"E	Commercial	66	56
				Sampling Location: In front of City Club, Pallobi 23° 49' 22.40"N 90° 21' 55.60"E	Commercial	70	58
Standard					**Commercial**	**70**	**60**
					Residential	**55**	**45**
					Mixed	**55**	**45**

Findings:

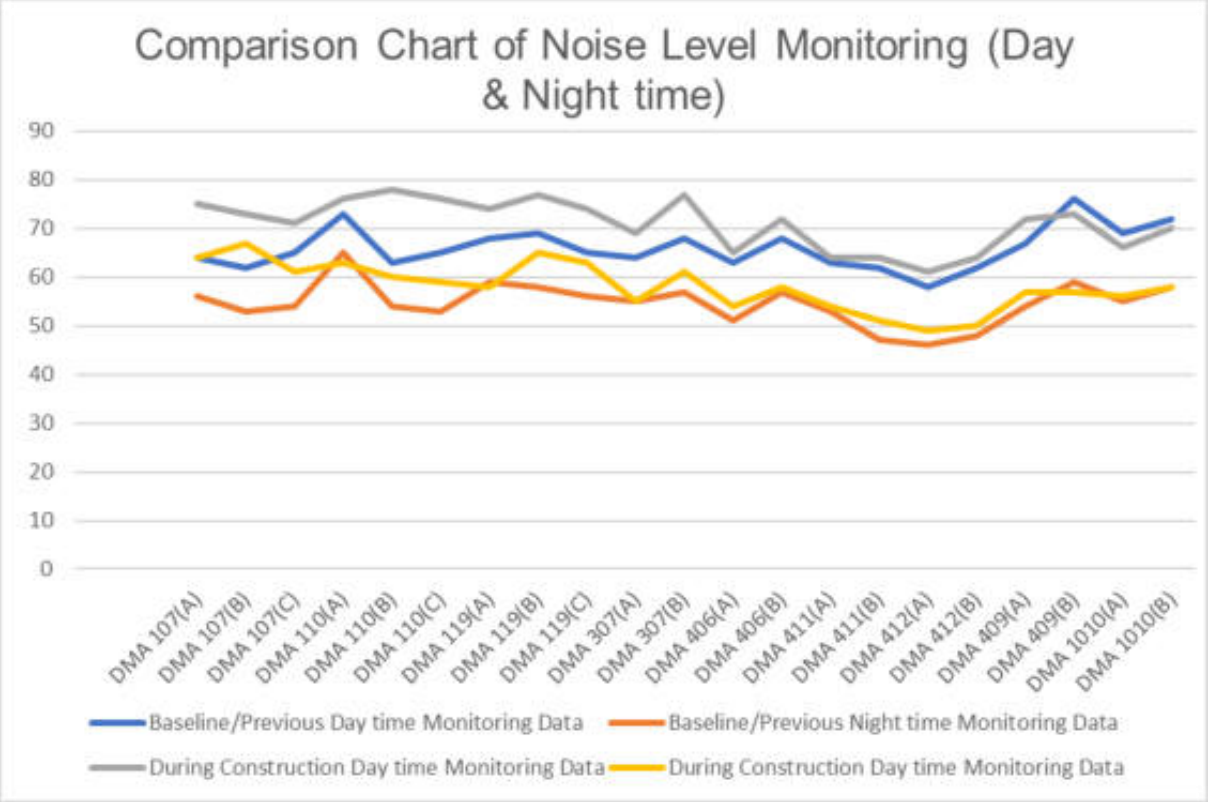
49. For most of the cases, noise levels during both baseline and construction stage are exceeded the national standards set for both day and night time due to different types of commercial activities, construction activities, traffic volume & other interruptions. To compare the during construction monitoring data with baseline monitoring data, a table-10A and a chart have been shown below:

Table-10A: Comparison Table for Noise Level Monitoring (with Baseline data/previous monitoring data)

Package No.	Name of DMAs	Site Location	Land use Category	Baseline/Previous Monitoring Data L_{eq} (dBA)		During Construction Monitoring Data L_{eq} (dBA)	
				Day Time	Night Time	Day Time	Night Time
ICB 2.10	DMA 107	Haider Ali School & College, Manda Bridge, Dhaka	Mixed	64	56	75	64
		Kadam Ali Jheelpar Road, Manda Road	Mixed	62	53	73	67
		Madrasha Bahrul Ulum, Manda Shes Bridge, Dhaka	Mixed	65	54	71	61
	DMA 110	Maniknagar Bus Stop, Ram Krishna Mission Road, Dhaka	Residential	73	65	76	63
		Maniknagar Wasa Road	Residential	63	54	78	60
		Manknagar Balur Math Panir Pump at East Maniknagar, Mugda	Residential	65	53	76	59
	DMA 119	Near Postogola Fire Service Station at MC Road, Postogola, Shampur, Dhaka	Mixed	68	59	74	58
		Near Janata Bank Ltd at 215, Karim Ullarbag, Postagola, Smashanghat Road, Dhaka	Mixed	69	58	77	65
		Near Jurain Labur Kachabazr at 74/D IT Plot, Balurmath, Postogola, Jurain, Dhaka	Mixed	65	56	74	63
NCB 2.11B	DMA 307	In front of Dhaka Art College	Mixed	64	55	69	55
		In front of Bangladesh Eye Hospital	Mixed	68	57	77	61
NCB 2.11C, Lot-1	DMA 406	Monipur High School & College, Ibrahimpur, Shewarapara, Mirpur, Dhaka	Mixed	63	51	65	54
		Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka	Mixed	68	57	72	58
	DMA 411	Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60-foot road), Mirpur-1, Dhaka	Residential	63	53	64	54
		Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur	Residential	62	47	64	51
	DMA 412	Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur	Commercial	58	46	61	49
		Ali Miar Tek Market, Pirerbag, West Shewarapara, Mirpur	Commercial	62	48	64	50
NCB 2.11C, Lot-2	DMA 409	In front of Hazrat Shah Ali Mohila College	Commercial	67	54	72	57
		In front of Sony Square Star Cineplex	Commercial	76	59	73	57
NCB 2.11D, Lot-1	DMA 1010	In front of Desh Polytechnic College	Commercial	69	55	66	56
		In front of City Club, Pallobi	Commercial	72	58	70	58

Standards:

	Day	Night
Commercial	70	60
Residential	55	45
Mixed	55	45



50. Mitigation measures were suggested to applied as per site specific EMP. Particular use of ear plugs by workers at high noise producing areas is necessary. Noise producing activity should be limited near residential areas, schools and healthcare facilities during working hours. Accordingly, instruction has been given to contractors. It is ensured that the contractors will strictly implement the action plan as per EMP for reduction of noise level and minimization of noise impact.

51. As per the site specific EMP, the Contractors are required to test the drinking water used by labors. Drinking water quality monitoring was carried out at pump locations of each DMA during project implementation period and before starting the implementation of work. The parameters were pH, DO, Chloride, Iron, Mn, As, Total Coliform, Turbidity, Total Suspended Solid, BOD5 and COD. During water collection period, the laboratory personal used proper Personal Protective Equipment (PPE) including vests, face musk, hand gloves and helmets. They collected the water sample by water collection sample bottle and sealed the bottle to carry to the laboratory. Laboratory analyzes the water by using different methods such as Electrometric, Nephelometric Method, Gravimetric, Electrometric, Argentometric, AAS, As-test kit, Membrane Filtration, 5 days BOD test and Closed Reflux, colorimetric Methods. The results are shown in Table 11 for drinking water.

Table-11A: Drinking Water Quality Results-at DMA Sites (ICB-2.10)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Chloride mg/L	BOD_5 mg/L	DO	COD mg/L	Iron, Fe mg/L	Mn mg/L	As µg/L	Total Coliform	Turbidity (NTU)	TSS mg/L
DMA 101	14-09-2023 - 19-09-2023	During Construction	DTW, Bashabo-3	6.85	34	0.15	3.15	12	0.155	0.167	<0.01	0	1.63	02
			DTW, Bashabo-1	6.79	26	0.19	4.50	<1.0	0.175	0.080	<0.01	0	0.85	03
			DTW, Kadamtola Sangsad	6.85	29	0.16	2.72	<1.0	0.072	0.133	<0.01	0	0.48	02
DMA 105	14-09-2023 - 19-09-2023	During Construction	DTW, Rajarbag Kalibari	6.87	13	0.12	2.48	10	0.598	0.136	<0.01	0	2.90	01
			DTW, South Rajarbag	6.77	10	0.10	2.97	<1.0	0.590	0123	<0.01	0	5.09	03
			DTW, Hoque Society	6.81	13	0.20	2.91	4	0.019	0.055	<0.01	0	0.41	01
DMA 107	02-08-2023 - 07-08-2023	During Construction	PTW, Manda-4	6.90	13	0.20	3.70	<1.0	0.11	0.092	<0.01	0	0.57	01
			PTW, Manda-1	6.94	16	0.22	2.98	<1.0	0.49	0.261	<0.01	0	1.53	02
DMA 109A	23-11-2023 - 28-11-2023	Baseline	DTW, Dayagonj-1	6.96	26	1.08	2.50	07	1.06	0.339	<0.01	0	0.40	01
			DTW, Gopibagh	6.95	28	0.74	4.93	07	1.66	0.499	<0.01	0	12.4	02
			Network, 14/22/A,Ovoy Das lane	7.06	18	0.53	6.29	14	0.18	0.118	<0.01	0	1.82	01
DMA 109B	29-11-2023- 05-12-2023	Baseline	DTW, Saidabad Bus Terminal	6.95	40	0.56	4.70	<1.0	0.111	0.119	<0.01	0	1.10	06
			DTW, Dayagonj-3	6.87	34	0.59	3.71	<1.0	0.015	0.087	<0.01	0	0.25	05
			Network, Uttar Gopibag Jame Mosjid	6.84	33	5.2	4.30	06	0.137	0.129	<0.01	0	0.90	02
DMA 111	14-11-2023- 19-11-2023	Baseline	DTW, East Dhalpur	7.05	9	1.0	3.48	2.0	0.222	0.063	<0.01	0	0.47	01

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Chloride mg/L	BOD_5 mg/L	DO	COD mg/L	Iron, Fe mg/L	Mn mg/L	As µg/L	Total Coliform	Turbidity (NTU)	TSS mg/L
			DTW, Jatrabari-3	6.86	40	1.04	4.80	2.0	0.143	0.088	<0.01	0	0.50	01
			Network, Dhalpur Narikal Bagan Jame Mosjid	6.82	32	2.5	5.12	18.0	0.374	0.128	<0.01	0	3.62	06
			Network, Child Heaven Tutorial School	6.89	8	14.5	7.51	19.0	0.913	0.054	<0.01	49	5.31	07
DMA 112	14-11-2023-19-11-2023	Baseline	DTW, Kazlarpar-2	6.79	12	0.89	3.15	1.0	0.612	0.133	<0.01	0	6.34	05
			DTW, Kazlarpar-1	6.88	12	1.0	2.39	2.0	0.138	0.028	<0.01	0	0.42	03
			Network, Flicker International School	6.86	13	1.0	7.51	2.0	0.712	0.021	<0.01	0	6.34	01
DMA 115	14-09-2023 - 14-09-2023	During Construction	DTW, Bhatikhana	6.75	25	0.20	5.71	<1.0	0.447	0.196	<0.01	0	4.74	2.00
			DTW, Gandaria-1	6.8	12	0.14	7.44	<1.0	0.036	0.029	<0.01	0	2.34	1.0
			DTW, Dhupkhola	6.80	45	0.15	6.45	<1.0	0.081	0.077	<0.01	0	0.63	1.0
DMA 117	29-11-2023-05-12-2023	Baseline	DTW, Mill Barrack	6.84	16	0.62	4.32	<1.0	0.188	0.305	<0.01	0	2.25	07
			DTW, IG gate Staff Quarter	6.91	28	0.72	2.75	<1.0	0.022	0.123	<0.01	0	0.38	01
			Network, Bangladesh Bank Adarsha High School	6.95	31	4.3	5.26	11	0.132	0.224	<0.01	0	2.24	01

Table-11B: Drinking Water Quality Results-at DMA Sites (NCB- 2.11B)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Turbidity	TSS	Dissolved Oxygen	Chloride	Iron	Manganese	Arsenic	BOD_5	COD	Total Coliforms
				-	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100 ml
DMA 307	10-09-23	During Construction	PTW	6.8	1.85	1.77	7.08	318	0.75	0.31	<0.1	0.17	3.03	0
			PTW	6.6	2.67	1.09	7.84	217	0.88	0.16	<0.1	0.46	3.28	0

Table-11C: Drinking Water Quality Results-at DMA Sites (NCB-2.11C Lot-1)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Turbidity	TSS	Dissolved Oxygen	Chloride	Iron	Manganese	Arsenic	BOD_5	COD	Total Coliforms
				-	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100 ml
DMA 406	14-09-2023	During Construction	PTW	6.9	1.82	1.6	6.97	402	0.67	0.3	<0.1	0.26	2.94	0
			PTW	6.8	2.63	1.03	7.77	292	0.91	0.02	<0.1	0.38	3.13	0
DMA 411	14-09-2023	During Construction	PTW	6.5	3.58	1.08	7.78	430	0.64	0.3	<0.1	0.25	3.67	0
			PTW	6.6	10.5	1.54	8.64	628	0.61	0.44	<0.1	0.31	3.57	0
DMA 412	14-09-2023	During Construction	PTW	6.8	4.35	1.11	7.17	419	0.9	0.35	<0.1	0.33	3.05	0
			PTW	6.9	1.82	1.6	6.97	402	0.67	0.3	<0.1	0.26	2.94	0

Table-11D: Drinking Water Quality Results-at DMA Sites (NCB-2.11C Lot-2)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Turbidity	TSS	Dissolved Oxygen	Chloride	Iron	Manganese	Arsenic	BOD_5	COD	Total Coliforms
				-	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100 ml
DMA 409	16-09-2023	During Construction	PTW	6.9	1.83	1.75	7.06	397	0.64	0.3	<0.1	0.28	3.03	0
			PTW	6.8	2.73	1.19	7.77	325	0.96	0.14	<0.1	0.39	3.26	0

Table-11E: Drinking Water Quality Results-at DMA Sites (NCB-2.11D Lot-1)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Turbidity	TSS	Dissolved Oxygen	Chloride	Iron	Manganese	Arsenic	BOD_5	COD	Total Coliforms
				-	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100 ml
DMA 1010	18-09-2023	During Construction	PTW	6.7	3.6	1.14	7.74	558	0.58	0.3	<0.1	0.31	3.6	0
			PTW	6.6	10.58	1.63	8.51	626	0.58	0.39	<0.1	0.22	3.62	0

Standards for drinking water

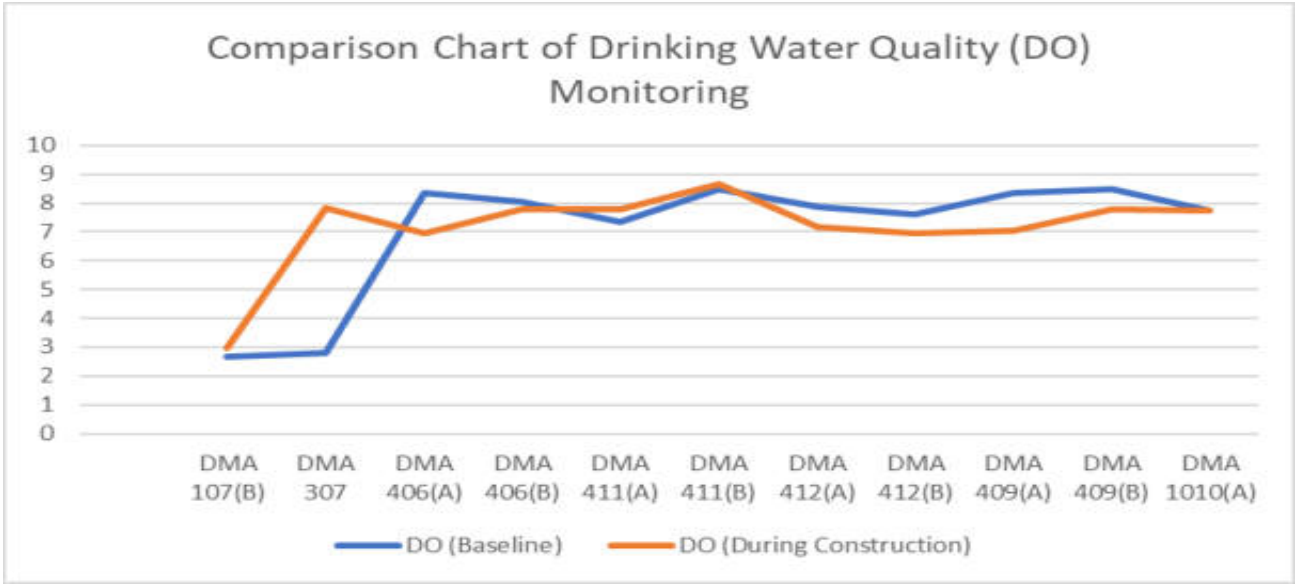
pH	Turbidity (NTU)	TSS (mg/L)	TDS (mg/L)	Dissolved Oxygen (mg/L)	Chloride (mg/L)	Iron (mg/L)	Mn (mg/L)	Arsenic (mg/L)	BOD5 (mg/L)	COD (mg/L)	Total Coliform (mg/L)
6.5-8.5	≤10	10	1000	6.0≤	150-600	0.3-1	0.1-0.4	0.05	0.2	4.0	-

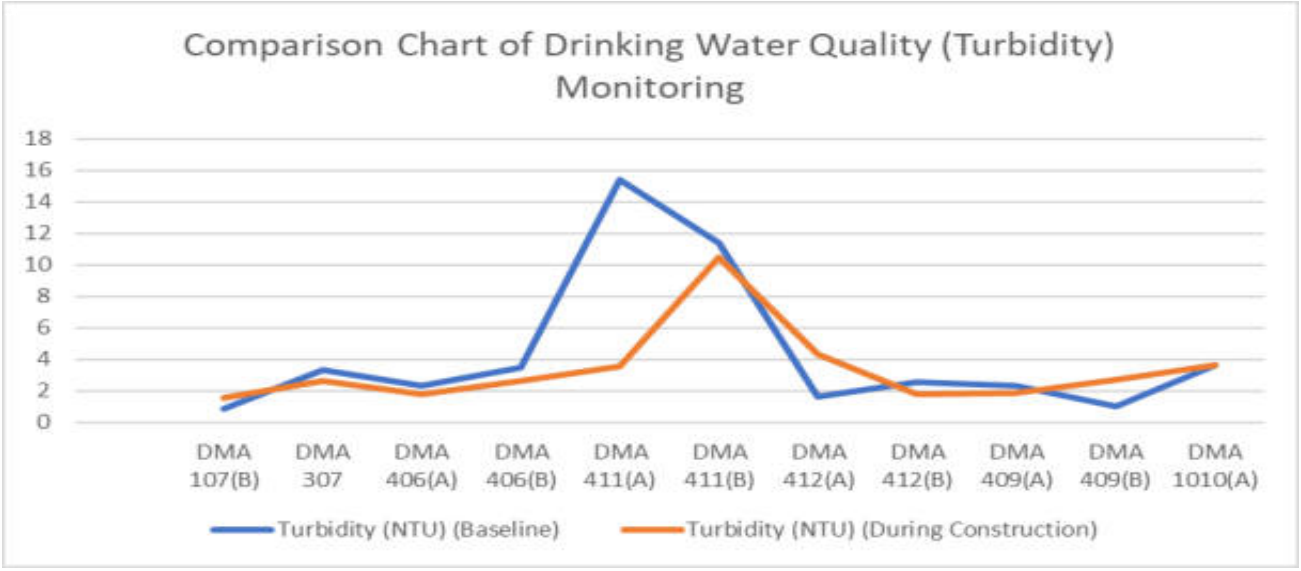
52. Findings: The laboratory analysis of water quality shows that water quality parameters concentration of most of the locations were within allowable limits of DoE, Bangladesh. DO has been surpassed in some location. This is mainly due to the concentrations are constantly affected by diffusion and aeration, photosynthesis, respiration and decomposition. While water equilibrates toward 100% air saturation, dissolved oxygen levels will also fluctuate with temperature, salinity and pressure changes in the area. To compare during construction monitoring with

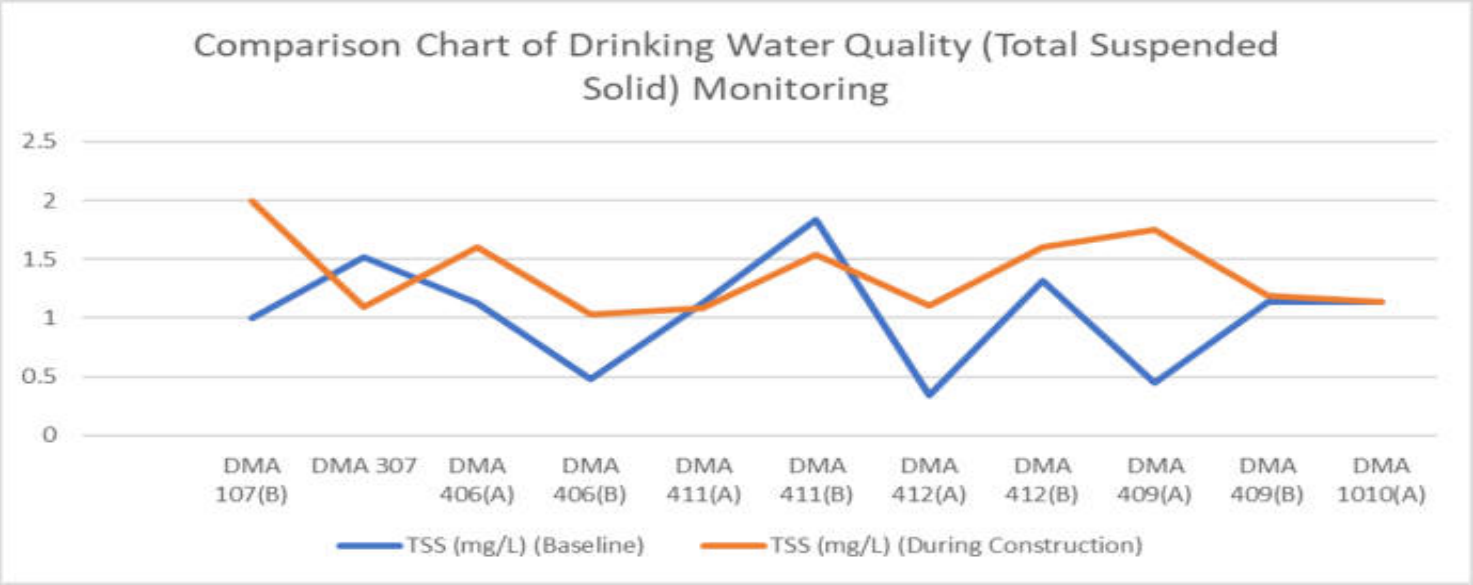
baseline monitoring a table-11F and comparison charts have been shown below:

Table-11F: Comparison Table for Water Quality Monitoring (with Baseline data/previous monitoring data)

Name of DMAs	Site Location	DO (Baseline)	Total Coliform (Baseline)	Turbidity (NTU) (Baseline)	TSS (mg/L) (Baseline)	DO (During Construction)	Total Coliform (During Construction)	Turbidity (NTU) (During Construction)	TSS (mg/L) (During Construction)
DMA 107(B)	PTW, Manda-1	2.65	0	0.89	1	2.98	0	1.53	2
DMA 307	PTW	2.82	0	3.32	1.52	7.84	0	2.67	1.09
DMA 406(A)	PTW	8.34	0	2.33	1.13	6.97	0	1.82	1.6
DMA 406(B)	PTW	8.03	0	3.47	0.48	7.77	0	2.63	1.03
DMA 411(A)	PTW	7.34	0	15.45	1.13	7.78	0	3.58	1.08
DMA 411(B)	PTW	8.5	0	11.4	1.84	8.64	0	10.5	1.54
DMA 412(A)	PTW	7.87	0	1.6	0.34	7.17	0	4.35	1.11
DMA 412(B)	PTW	7.59	0	2.54	1.32	6.97	0	1.82	1.6
DMA 409(A)	PTW	8.34	0	2.33	0.45	7.06	0	1.83	1.75
DMA 409(B)	PTW	8.49	0	1.05	1.14	7.77	0	2.73	1.19
DMA 1010(A)	PTW	7.74	0	3.6	1.14	7.74	0	3.6	1.14


Comparison Chart of Drinking Water Quality (DO) Monitoring
10
9
8
7
6
5
4
3
2
1
0
DMA 107(B)
DMA 307
DMA 406(A)
DMA 406(B)
DMA 411(A)
DMA 411(B)
DMA 412(A)
DMA 412(B)
DMA 409(A)
DMA 409(B)
DMA 1010(A)
DO (Baseline)
DO (During Construction)


Comparison Chart of Drinking Water Quality (Turbidity) Monitoring
18
16
14
12
10
8
6
4
2
0
DMA 107(B)
DMA 307
DMA 406(A)
DMA 406(B)
DMA 411(A)
DMA 411(B)
DMA 412(A)
DMA 412(B)
DMA 409(A)
DMA 409(B)
DMA 1010(A)
Turbidity (NTU) (Baseline)
Turbidity (NTU) (During Construction)



53. Surface water samples were also taken where available the surface water body to evaluate water quality due to project activities in the surrounding water bodies in ICB-2.10 package. Surface water quality monitoring was carried out at the water bodies locations of each DMA during project implementation period and before starting the implementation of work. The parameters were pH, DO, Chloride, Iron, Mn, As, Total Coliform, Turbidity, Total Suspended Solid, BOD5 and COD. During water collection period, the laboratory personal used proper Personal Protective Equipment (PPE) including vests, face musk, hand gloves and helmets. They collected the water sample by water collection sample bottle and sealed the bottle to carry to the laboratory. Laboratory analyzes the water by using different methods such as Electrometric, Nephelometric Method, Gravimetric, Electrometric, Argentometric, AAS, As-test kit, Membrane Filtration, 5 days BOD test and Closed Reflux, colorimetric Methods. The results are shown in **Table-12**

Table-12: Surface Water Quality Results-at DMA Sites (ICB-2.10)

Name of DMAs	Date of Testing	Monitoring Stage	Site Location	pH	Chloride mg/L	BOD_5 mg/L	DO	COD mg/L	Iron, Fe mg/L	Mn mg/L	As µg/L	Total Coliform	Turbidity (NTU)	TSS mg/L
DMA 109A	23-11-2023 - 28-11-2023	Baseline	Ram Krishna Mission Pond	7.12	24	13.4	3.79	70	0.19	0.108	<0.01	$2x10^3$	8.41	16
DMA 112	14-11-2023- 19-11-2023	Baseline	Kazla Canal	6.90	16	188	0.25	318	0.891	0.325	<0.01	$2x10^4$	61.0	140
DMA 117	29-11-2023- 05-12-2023	Baseline	Gendaria DIT Pond	6.93	41	29.9	4.09	38	0.074	0.071	<0.01	$1x10^3$	4.05	05

54. During Construction" air quality, noise level and water quality monitoring will be continued for the packages as per Environment Management and Monitoring Plan. All monitoring expenses will be borne by contractors which mentioned in the bidding document under the contract section 6, sub clause 2.14 (safeguards) and sub clause 2.14.1 (IEE).

55. The Environmental Management Implementation Work Schedule has been prepared by contractor for next six months (January-June, 2024) to implement the EMP plan wise while showing precisely how and when construction period mitigation and monitoring actions will take place. The following Table shows the Environmental Management Implementation Work Schedule for next six months (January-June, 2024).
Attached in annex-08

V. CONSULTATIONS AND DISCLOSURES CONDUCTED

56. During the IEE updating of various DMAs (subprojects), the stakeholders were consulted and involved through discussions on-site and public consultation at several places in the DMA. The view and feedback were incorporated into the IEEs and project design and development as appropriate. As per approved IEE, consultations and disclosure will be a continuous process throughout project implementation involving public consultations and focus group discussions. Accordingly, during the implementation phase, the consultation process has been continued to ensure that stakeholders are fully engaged in the project and have the opportunity to participate in its development and implementation.

57. Different type of stakeholders such as respective WARD representatives - elected Councilor, line departments and utility agencies, general public, residents, business, vendors etc., in were consulted. Consultations conducted mostly near the work sites such as along pipe laying sites, such consultation is basically one to one discussion with public and generally to be continued throughout the construction period. Construction phase issues, and implementation of EMP measures were discussed. The issues like requirement of restoration of utility services, removal of overburden soil, road restoration done or not, dust and noise pollution during implementation of the project, community safety arrangement, availability of public access have been discussed and views has been tabulated**.**

58. The indicative schedule for consultations and disclosure are presented in Table 14.

Table 13: Indicative Schedule for Consultations and Disclosure

Type of Consultation/Disclosure	Target Date	Location	Target Participants	Responsible Person
Local Level Consultation	Weekly – to be continued	At all construction locations	General public, shop keepers, pedestrian population	Supervisors of 'NGO Awareness'; Environment and Safety Officer of Contractor, ARE, Environmental Inspector of DMS-continuous process
Consultation-safety issues, EMP implementation	Bimonthly	DMS office, PM site office and construction site	ARE/SARE of DMS, Supervisor Engineers of Contractor, Environment and safety Officer of Contractors	Environmental Specialist, Environmental Inspector of DMS

59. During reporting period, Civil contract contractor has updated IEE report for ICB 2.10, NCB 2.11B, NCB 2.11C (Lot-1&2), NCB 2.11D (Lot-1&2), NCB 2.12A, NCB 2.12D and NCB 2.12E at different DMA locations. During updating of IEE report, local level consultation has been conducted at different DMA locations. List of participants, pictures etc. are provided in **Annex 10.**

Summary of Public Consultation Meetings – July-December, 2023

Sl.	Venues	DMAs	Date	Time	Participants	Remarks	Sl.	Venues
	-				Total	M	F	
1	Kutubkhali	701	04/09/21	12:40	12	12	0	TSM
2	Adorho School, Kazla	701	08/09/21	11:30	20	12	08	FGD
3	Mridhabari	701	12/09/21	12:20	12	11	1	TSM
4	Kutub khali, Jatrabari	701	13/12/23	01.45	13	13	0	FGD
5	52 No. Ward Councillor office	705	26/09/23	11.00	17	11	6	FGD
	Total				**74**	**59**	**15**	

- All stakeholders were very supportive of the project, extended full cooperation during the works, and requested the PMU to complete the works at the earliest
- Stakeholders indicated that works are being conducted without much disturbance to people, however, some stakeholder aired their grievances such as damaged to utilities (water pipelines, and house connections), non-clearance of surplus soil, delay in road restoration, dust, traffic disruptions, etc., PMU informed that these gaps in EMP implementation have already been identified by DMSC and PCU and respective Civil Works Contractor directed to improve the compliance.
- PMU also explained the grievance redress system of the project, and encouraged public to bring their grievances, if any, to the notice of project agencies for early resolution

VI. GRIEVANCE REDRESS MECHANISM

60. A project-specific grievance redress mechanism (GRM) is established to receive, evaluate, and facilitate the resolution of AP's concerns, complaints, and grievances about the social and environmental performance at the level of the project. The GRM aims to provide a time-bound and transparent mechanism to record and resolve social and environmental concerns linked to the project. A common GRM is in place for social, environmental, or any other grievances related to the project; the resettlement plans (RPs) and IEEs will follow the GRM described below. The GRM provides an accessible and trusted platform for receiving and facilitating resolution of affected persons' grievances related to the project. The multi-tier GRM for the project is outlined below, below, each tier having time-bound schedules and with responsible persons identified to address dress grievances and seek appropriate persons' advice at each stage, as required.

61. PMU will maintain a Complaint Cell headed by a designated Grievance Officer at its office. The Grievance Registration/Suggestion Form **(Annex 6)** is available at the Complaints Cell and in Zonal Offices and will also be downloadable from the DWASA website (link to DWASA website: https://dwasa.org.bd/dwsnip/).

62. PMU/PCU with assistance from NGO (Resettlement and Public Awareness Campaign) are ensuring that awareness on grievance redress procedures is generated through the campaign. PCU Safeguard Focal Person through NGO –Public Awareness (SAMAHAR) team conduct wide awareness campaigns at each DMA sites to ensure that poor and vulnerable households are made aware of grievance redress procedures and entitlements.

63. APs have the flexibility of conveying grievances/suggestions by dropping grievance redress/suggestion forms in complain complaints/suggestion boxes or by e-mail, by post, by telephone, or by writing in a complaint register in PMU/PCU offices. Careful documentation mentation of the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how the problem was resolved are being undertaken by NGO/DMSC. The PMU Project Officers (Environment & Social) have the overall responsibility for timely grievance redress respectively on environmental and social safeguards issues and for registration of grievances, related disclosure and communication with the aggrieved party through PCU (Safeguard Nodal Person).

64. GRC was established on Dec 19, 2018 at both PMU and PCU level. The GRC committee are shown below:

GRC at PMU Level:

1.	Project Director- DWSNIP	-	Convener
2.	Deputy Project Director	-	Joint Convener
3.	Safeguard Focal Person (Concerned Executive Engineer)	-	Member
4.	Environmental Expert, DMS, DWSNIP	-	Member
5.	Resettlement Expert, DMS, DWSNIP	-	Member
6.	Team Leader, Resettlement (NGO SAMAHAR)	-	Member
7.	Affected Person (APs)/Representative (if applicable)	-	Invited Specially

GRC at PCU Level:

1.	Executive Engineer (Concerned MODS Zone)	-	Convener
2.	Safeguard Focal Person (AE/SDE, (Concerned MODS Zine)	-	Member
3.	Team Leader, Resettlement (NGO SAMAHAR)	-	Member
4.	Resettlement Officer of Concerned Civil Works Contractor	-	Member
5.	Ward Councilor/Female Ward Councilor (Concerned City Corporation)	-	Member
6.	Affected Person (APs)	-	Invited specially

Grievance Redress Process

65. Grievances received and responses provided have been documented and reported back to the affected persons. The number of grievances recorded and resolved and the outcomes have been displayed/disclosed in the offices of the different Zonal office of DWASA and web. Project-affected people can also send their grievances directly to ADB through the Bangladesh Resident Mission and/or to ADB's Accountability Mechanism

66. To resolve all project related grievances and complaints a common social and environmental grievance redress mechanism have been in place. Common and simple grievances is sorted out at project site/DMA level by the Contractor's Resettlement Supervisor, supervision staff of PMU and project NGO within 7 days. More serious complaints are sent to the safeguard officer at the PCU to be resolved in 14 days. If any unresolved grievances occur, the procedure is to forward that to PMU to resolve within 21 days. Despite the project GRM, an aggrieved person has access to the country's legal system at any stage.

67. **Consultation Arrangements.** This includes group meetings and discussions with affected persons, to be announced in advance and conducted at the time of day agreed on with affected persons and conducted to address general/common grievances; and if required with the Environment/Resettlement Specialist of PMU/DMSC for one-to-one consultations. Non-literate affected persons/ vulnerable affected persons are assisted to understand the grievance redress process, to register complaints and with follow-up actions at different stages in the process.

68. Record-Keeping. Records are kept by PMU/PCU Office/Contractors' site office of all grievances received including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were in effect, and final outcome.

69. The number of grievances recorded and resolved and the outcomes are displayed/disclosed in the offices of the different MODS zone of DWASA and web. The phone number where grievances are to be recorded are prominently displayed at the construction sites.

70. Periodic Review and Documentation of Lessons Learned**.** PMU periodically reviews the functioning of the GRM and effectiveness of the mechanism, especially on the Project's ability to prevent and address grievances.

71. All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) is borne by PMU.

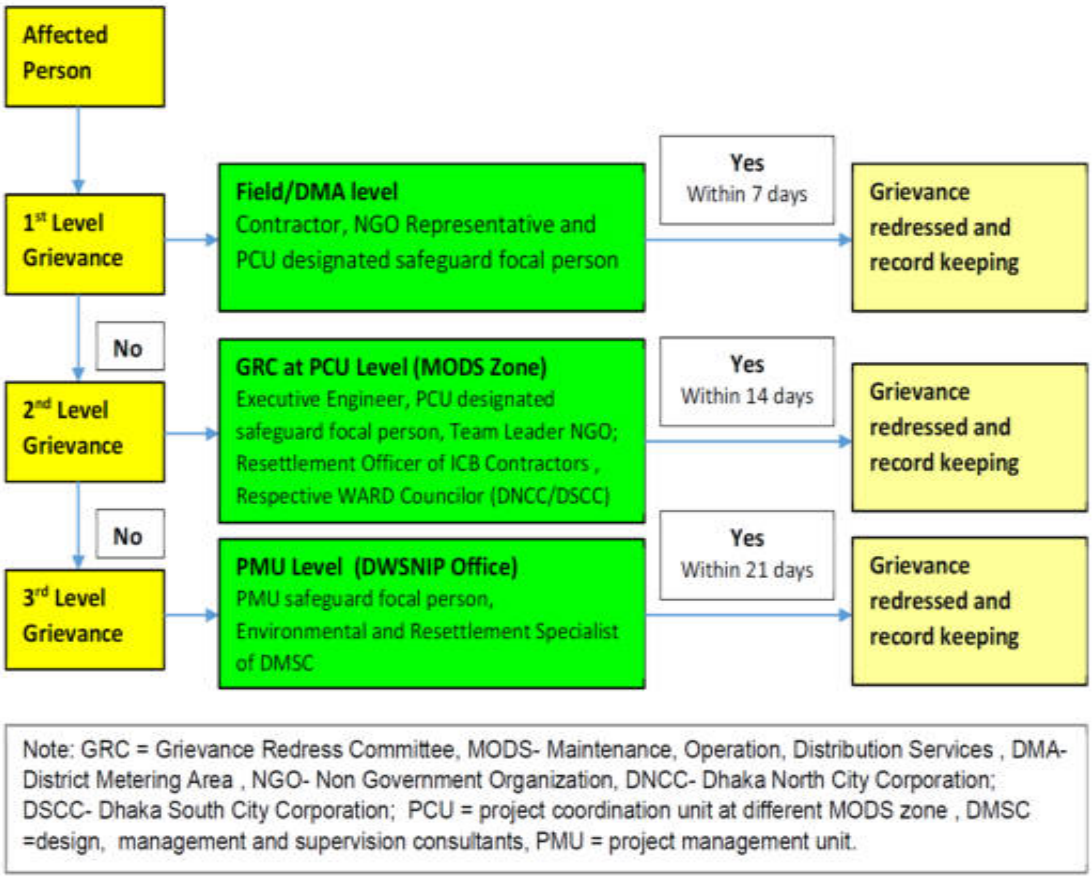


Figure 3: Flow Chart of GRM Process

Complaints Received during Reporting Period

72. All grievances – major or minor, during the project implementation are registered. Officials are maintaining a register of all grievances with the name of the complainant, date of receipt of the complaint, address/contact details of the person, location of the problem area, and how & when the problem was resolved, etc.

73. The initiate in the field level GRM is publicized among the local population is taken by the NGO and the contractors. The NGO firstly aware the local people of the project by tea stall meeting, focused group discussion, mosque discussion and also house to house talk. The local people aware of the fact about the complaint they may have and can be anonymously posted in the complaint box also in the complaint registration book which is available in the construction site, contractor site office, PCU, and PMU office.

No complain received during reporting period. But the arrangement was available in the construction site, contractors site office, PCU and PMU. Some pictorial evidences are presenting in the table below:

Pictorial Evidences of complaints boxes in the site office and construction sites

GRM for Labors

74. Grievance Redress Mechanism (GRM) has also been established for labourers /workers whose grievances are heard and recorded regularly, and appropriate actions are taken to redress them. All Civil works contractors discussed with Labourers during working time to receive and record their complaint if they had.

VII. TRAINING AND CAPACITY BUILDING PROGRAM AND INCIDENT SUMMARY

75. As suggested in the respective IEE and EMPs, various training and capacity building programs conducted specific to environment, health, safety and implementation of EMPs. Training program on safety and environment has been arranged for contractors, supervisors by DMSC and ADB safeguard specialists / consultants in PMU Office, DMS office and PM site office, Contractor's site office, stockyard/ camp site and construction site during the reporting period. Details are provided in the following table.

Table -16: Capacity Building/Training Activities

Training Title	Date and Venue	Training Details & Participants	No of Participants	
			Male	Female
Fire Drill Risks & safety	10.07.2023 DMA-101 (Bashabo - 2 no water pump, Chayabithi)	APM, SE, SA, SG, Store Supervisor Plumber, Welder, M/R	36	0
Fire & safety	12.07.2023 Demra workshop	APM, AM, SE, SA, SG, Store Supervisor Plumber, Welder, M/R	34	0
Operation and Maintenance safety Security training of DMA 108A & 116	20.08.2023 At Kamalapur project office	CME, DCM, SM, DSM, PM, ASM, PE, AE, APE, SE, TE, Eng, OM, OA & etc.	35	0
Vehicles Fitness (timely maintenances & cleanliness), Safety Awareness, Mental and physical fitness	03.09.2023 At kamalapur project office	O/P, ASE, M/C, TCO,	24	0
Fire & safety	26.09.2023 Demra workshop	SE, SA, SG, Store Supervisor Plumber, Welder, M/R	29	0
Fire Drill Risks & safety	23.10.2023 Store of DMA-116, Jatrabari Demra	SE, SA, SG, Store Supervisor Plumber, Welder, M/R	21	0
Safety training on Fire Drill	19.11.2023 DMA-101 Store (Bashabo -2 Chayabithi)	Store Supervisor Plumber, Welder, M/R	20	0
Environment, Health and Safety at working sites	23.08.2023 At Shyamoli Site	SM, DSM, ASM, PE, APE, SE, Eng, O&M, OA	10	1
Training for Safety health and accident issues at construction	18.09.2023 at Tekkapara Site office	SM, SE, Eng. O&M, OA	12	3
Training for work Safety and health safety	15-07-23 (DMA 307) 19-08-23 (DMA 305) 23-09-23 (DMA 312)	Site in Charge, Site Engineers, Supervisors, workers of contractors	16	0

	28-10-23 (DMA 313)			
Training for work Safety and health safety	29-07-23 (DMA 307) 26-08-23 (DMA 305) 30-09-23 (DMA 312) 11-11-23 (DMA 313)	Site In Charge, Site Engineers, Supervisors, workers of contractors	15	0
Training for work Safety and health safety	19-08-23 (DMA 307) 16-09-23 (DMA 305) 14-10-23 (DMA 312) 02-12-23 (DMA 313)	Site In Charge, Site Engineers, Supervisors, workers of contractors	12	0
Training for work Safety and health safety	16-07-23 (DMA 406) 20-08-23 (DMA 411) 24-09-23 (DMA 412)	Site In Charge, Site Engineers, Supervisors, workers of contractors	14	0
Training for work Safety and health safety	30-07-23 (DMA 406) 27-08-23 (DMA 411) 01-10-23 (DMA 412)	Site In Charge, Site Engineers, Supervisors, workers of contractors	12	0
Training for work Safety and health safety	17-07-23 (DMA 409) 02-12-23 (DMA 414)	Site In Charge, Site Engineers, Supervisors, workers of contractors	16	0
Training for work Safety and health safety	01-08-23 (DMA 409)	Site In Charge, Site Engineers, Supervisors, workers of contractors	15	0
Training for work Safety and health safety	18-07-23 (DMA 1010) 05-12-23 (DMA 1005)	Site In Charge, Site Engineers, Supervisors, workers of contractors	14	0
Training for work Safety and health safety	02-08-23 (DMA 1010)	Site In Charge, Site Engineers, Supervisors, workers of contractors	12	0
Environment, Health and Safety at working sites	21.12.2023 At kamalapur project office	SM, DSM, ASM, PE, APE, SE, Eng, O&M, OA	24	1
Training for Safety health and accident issues at construction	19.11.2023 At kamalapur project office	SM, SE, & Female worker	4	6
Maintenance and Safety Security	20.10.2023 Namapara open field	Technician & Skilled labor	34	0
Mechanics training program	10.09.2023 Demra workshop	Technician & Mechanics	12	0

VIII. HEALTH AND SAFETY STATUS

76. This section presents the status of Health and Safety of DWSNIP subprojects under 3-ICB packages (ICB-2.8, ICB-2.9, ICB-2.10), NCB packages (NCB 2.11A, 2.11B, 2.11C (Lot-1&2), 2.11D (Lot-1&2)) and LIC Packages with implementation and rehabilitation of different activities mentioned below:

Objectives	Measures
Site Security Measures	Use of proper safety signage, display board, caution tape, hard barricading should be done during implementation work. The photograph of safeguard compliances attached in **Annex-5**
PPE inventories	Use of proper Personal Protective Equipment (PPEs); i.e.; Hard hat, Eye Protection, Hand Protection, Foot ware, Ear-protection, Safety Vest; should be used during implementation work. **(Annex-5)**
Medical and First Aid provision:	First aid kits are necessary so that injuries can be treated immediately to help reduce the risk of infection to the injury. A first aid assessment should be carried out to be able to provide first response to all types of accidents and injuries. First aid kits should include: Moist wipes, Disposable gloves, Medium and large sterile dressings, Sterile eye pads, Saline solution, Eye baths, Triangular bandages.
Emergency preparedness and response procedures	The following emergency protocol will be maintained. Site Manager will seal off the work area immediately; He will notify appropriate emergency mitigation team (i.e., hospital, fire department, etc.); Then he will notify Contract Manger of the incident; Contract Manager will inform the Director and the client of the incident; Contract Manager and Client will decide when to re-open work site; The emergency incident will be logged for Client's review. The Root cause analysis reports during reporting period have been enclosed in **annex-12**
Safety Checklists	Safety Checklists for Excavation work, Traffic Management Work, Electrical Work, Fire Safety, DTW works, Safety for Asbestos Cement pipe, Dust and Noise control, OHS a& CHS safety have been enclosed in **annex-14**

77. Few minor incidents occurred at DWSNIP during this reporting period. Please see the summary of all the incident/accident in the following table. And root cause analysis report has been attached in **Annex-12**

Table: Incident Report for Human (July-December, 2023)

Sl.	Date and Time	Location	Type of Work	Nature of Incident	Description	Corrective Action
1	19.07.2023 04:00 PM	Demra Central Store, Demra	Labour	Finger injury	Two fingers of the left hand were cut due to pressure of a RCC meter box	Instantly First Aid was applied in Demra Central Store and send him to the hospital
2	18.07.2023 10:37 AM	Manda-5 Water Pump	Labour	Finger injury	During pump up gradation he slipped his hand and cut the little finger of his right hand	Applied initial treatment at work site and sent him to the Dhaka Medical College Hospital
3	10.09.2023 03:29 PM	DMA-101 Store (Bashabo -2 Chayabithi)	Labour	Finger injury	The little toe of the left leg was cut down due to pressure of RCC meter box	First Aid was apply instantly then sent him to the hospital
4	17.12.2023 12:40 AM	DMA-103 Store Kamlapur Railway Station, Motijeel	Cook	Burnt	Suddenly fire explosion due to gas leakage in kitchen at cooking time and some area of his face were superficial burns (mild)	Applied initial treatment and sent him to the Dhaka Medical College Hospital
5	30.08.2023 11:00 AM	DMA 307	Labour	Pain in the finger	Hand injury while working on trench cutting	Applied first aid and advised to take rest
6	07.09.2023 11:40 AM	DMA-1001 Namapara, Manikdi	Labour	Burnt	From the Gas	After providing First Aid transferred him to Mugda Medical College & Hospital
7	15.11.2023 04:00 AM	DMA-1001 Namapara Bazar Manikdi	Labour	Small wound	During OT accidentally hit the Electric Cable	First Aid was applied and he was advised to take rest

Table: Summary of accident/incident record during the reporting period (July-December, 2023)

SL.	Description	During the reporting period							Cumulative (July-December, 2023)
		ICB 2.10	NCB 2.11A	NCB 2.11B	NCB 2.11C (Lot-1)	NCB 2.11C (Lot-2)	NCB 2.11D (Lot-1)	NCB 2.11D (Lot-2)	
1	Fatal accident	0	0	0	0	0	0	0	0
2	Lost Time injuries (LTI)	0	0	0	0	0	0	0	0
3	Medical Treatment	4	0	0	0	0	0	1	5
4	First Aid case	0	0	1	0	0	0	1	2
5	Fire	1	0	0	0	0	0	1	2
6	Security incident	0	0	0	0	0	0	0	0
7	Near miss	0	0	0	0	0	0	0	0

IX. MITIGATION MEASURES FOR PREVENTION OF COVID 19

78. With the outbreak of COVID 19 Pandemic and subsequent lockdown, most of the activities in the country stopped temporarily until the country became normalized. From around 26th March up to 31st May 2020 almost all the construction sites in the country were temporarily suspended. With the decrease of the threat of COVID 19, construction activities of the DWSNIP resumed with compliance to government's Technical Guidance for Social and Institutional Containment and Prevention of Pandemic COVID-19 Infection issued on 11 May 2020 applied by the Ministry of Health and Family Welfare and Director General Health Service (MOHFW/DGHS) and the guidelines circulated by the LGD.

79. The Addendum Health and Safety (H&S) Plans in response to COVID-19 were developed by all civil works contractors and approved by PMU as well as ADB. In summary, the following important elements in the H&S plans:

(i) The plans are not intended to replace any formalized procedures currently in place for the Contractors. If the H&S Plans do not meet or exceed the standards put forth by the Contractors in their EMPs, SEMPs or other plans, the Contractors shall abide by the most stringent procedures/standards available;
(ii) The existing Environmental Officer or health & safety officer or Site Manager of the contractors can be designated as OHS officers;
(iii) Requirement for induction of employees and workers on COVID-19 per WHO guidelines, including training and monitoring;
(iv) List of specific PPE needs of all workers on a daily basis, with estimated costs to be borne by the contractors or funded under the contingency cost of provisional sum (subject to confirmation by PMU);
(v) Specific guidance for the management teams, offices, site labourers and stock yards/construction camps, including site facilities needed, on the implementation of COVID-19 prevention measures;
(vi) Self-declaration and monitoring checklists; and
(vii) Arrangement and contact numbers in cases of emergencies.

80. Meanwhile, BRM have prepared a COVID-19 Health and Safety Advisory Guidance for Construction Workforce and provided to Project Director on July 21, 2020. The guidance includes the protocols on the following:

(i) Prerequisite measures before reopening the worksites;
(ii) Worksite entrance;
(iii) Worksite management;
(iv) Camp management;
(v) Work site awareness raising;
(vi) Risk exposure assessment guidance;
(vii) Engage an employee/staff to oversee health and safety issues; and
(viii) Monitoring and reporting mechanism.

X. OBSERVATIONS AND RECOMMENDATIONS

81. Based on the foregoing observations, findings and environmental monitoring carried out from July-December, 2023, it may be concluded that ICB 2.10, NCB 2.11A, 2.11B, 2.11C (Lot-1&2), 2.11D (Lot-1&2) under DWSNIP subprojects (DMAs) have been implemented as just satisfied. There are some non-compliance EMP activities noticed in the monitoring report in each DMA sites of different packages for which Corrective Action Plans have been prepared and presented in Table 8. Following are noncompliance issues for Packages

- Some trenches were found open after laying pipes improved at site
- Although Contractor has provided adequate numbers of PPEs but use of these PPEs during construction sites are inadequate.
- Management of air quality, dust and noise
- Lack of using barricade and caution tape improved
- Spoil disposal management improved

82. The concerned Contractors have been suitably advised. Contractors have also been advised to provide written commitment for implementation of corrective action plan. Contractor will mitigate the above issues according to Table 8 to remove these non-compliances.

83. At the beginning of the construction works at all DMAs, the Contractors were reluctant to comply with the EMP, HSP and use of Face Mask properly. From the initiative and continuous monitoring and supervision both from DMS and DWASA the safeguard compliances were achieved and all the safeguard compliances were found to carry out by the Contractors during reporting period.

84. Table 17 provides the recommended corrective action plan that has been devised and target dates that have been set so as to remove these non-compliances. The concerned Contractors have been suitably advised. Contractors have also been advised to provide written commitment for implementation of corrective action plan

Table 17: Implementation of Corrective Action Plans

Sl No.	Non-Compliance	Action Required	Actual mitigation taken	Time Frame	Responsibility	Compliance Status
NCB 2.11						
1	Not available traffic signage (Signs, Pavement Markings, Arrow Panels, Warning Lights) on site	Ensure the safety of all the road users along the work zone and Mark all under construction road.	Traffic signage has been used in front of the road as well as traffic diversion.	During construction work	Contractor-CCSEB-RPL JV	Partially improved; Further improvement is required
2	No notice board installed in the construction area within DMA	Immediate arrangement of proper notice board (Project information, nature of work and duration of the activities) at all construction sites	Notice board/banner was placed in the construction site during the construction work	During construction work	Contractor-CCSEB-RPL JV	Improved
3	Dust problem was noticed in the construction area	Sprinkling of water should be carried out at dusty sites	Sprinkling of water twice in a day has been carried out.	In dusty days	Contractor-CCSEB-RPL JV	Improved
4	Noise level at some worksites was found higher	Provide Air plug to the workers and aware them to use it. Noise level needs to be monitored according to EMP	Air plugs were provided during construction work.	Where needed	Contractor-CCSEB-RPL JV	Improved
5	Incomplete use of PPEs by Workers	The Contractor to ensure the use of PPE on site	Trainings were carried out every day before construction work and workers were educated on importance of using PPE by the health and officers	Daily basis before construction work	Contractor-CCSEB-RPL JV	Partially improved; Further improvement is required
6	Poor Health and safety in COVID 19 prevention	Immediate improvement is required	Face mask, hand sanitizer, soap, disinfectants were provided to prevention.	During construction work	Contractor-CCSEB-RPL JV	Improved satisfactorily

Table 17A: Corrective action plan for the next reporting period January-June, 2024

SL	Non-compliance	Action required	Target date	Responsibility	Remarks
ICB 2.10					
1	Insufficient display warning signs	Providing Warning display where construction work ongoing	During Construction	Contractor-CCSEB-RPL JV	
2	Insufficient display board, traffic diversion, clean and clear passage way	Providing traffic diversion, display board, clean & clear passage way should be placed in the work site	During construction	Contractor-CCSEB-RPL JV	
3	Insufficient distance from excavated materials and open pit	Excavated materials should be placed 1m away from the pit	During construction	Contractor-CCSEB-RPL JV	
NCB 2.11					
1	Insufficient display board, traffic diversion, clean and clear passage way	Need to provide traffic diversion, display board, clean & clear passage way should be placed in the work site	During construction	Contractor-TCEL, RFL, PDL-AEDL	
2	Irregular trainings on OHS to workers	Need to provide regular toolbox talk before construction work and site-specific work-related trainings	Before construction work	Contractor-TCEL, RFL, PDL-AEDL	
3	Not availability of temperature screening facility, first aid box, hand washing facilities	Need to provide proper first aid box, hand washing facilities and temperature screening facilities	On construction site	Contractor-TCEL, RFL, PDL-AEDL	
4	Insufficient display warning signs	Providing Warning display where construction work ongoing	During Construction	Contractor-TCEL, RFL, PDL-AEDL	

85. Failure to perform the instructions, The Project Manager will take action against each Contractors. Alongside the Contractors are advised to follow the guidelines & instructions of DMS Officials. Environmental Specialist of DMS recommended the corrective measures which the contractor will do immediately for EMP and HSP compliance.

86. Prior to start works, the Contractor will recommend to provide the following information according to SEMP

- Name of Health, Safety Officer and Site Supervisors with contact details
- No. of workers (Male/Female wise)
- Copies of all permission/approvals for construction from concerned authority
- Tool box training to staff and workers

- Detail of Notice Board
- DMA wise traffic management plan
- Details of PPEs (item wise) including prevention of COVID 19
- Awareness Poster for COVID 19 prevention

Annex 01: ICB Package-wise Design and Implementation Status (Till December 2023)

ICB Package no.	Batches	DMA	Survey	Model Design	Detail Design	Joint Verification	Method of Statement	Road cutting permission	Materials Mobilization & Testing
ICB-2.10	1st Batch	DMA 108A	Handover completed						HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Float Valve; all mobilization and testing completed Deep Tube well 1 set mobilization and testing completed.
		DMA 108B	Y	Y	Y	Y	Y	Partially road cutting permission has been obtained	
		DMA 113	Handover completed						
		DMA 115	Handover completed						
		DMA 116	Handover completed						
	2nd Batch	DMA 101	Y	Y	Y	Y	Y	No road cutting permission has been obtained	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Float Valve; all mobilization and testing completed
		DMA 102	Y	Y	Y	Y	Y		
		DMA 103	Y	Y	Y	Y	Y		
		DMA 105	Y	Y	Y	Y	Y		
		DMA 106	Y	Y	Y	Y	Y		
		DMA 114	Handover completed						
	3rd Batch	DMA 104	Y	Y	Y	Y	Y	No road cutting permission has been obtained	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Bulk Water Meter, Float Valve; mobilization and testing completed.
		DMA 110	Y	Y	Y	Y	Y	Partially road cutting permission has been obtained No road cutting permission has been obtained	
		DMA 117	Y	Y	Y	Y	Y		
		DMA 118	Y	Y	Y	Y	Y	No road cutting permission has been obtained	
		DMA 119	Y	Y	Y	Y	Y	No road cutting permission has been obtained	

ICB Package no.	Batches	DMA	Survey	Model Design	Detail Design	Joint Verification	Method of Statement	Road cutting permission	Materials Mobilization & Testing
	4th Batch	DMA 107	Handover completed						
		DMA 109A	Y	Y	Y	Y	Y	Partially road cutting permission has been obtained	
		DMA 109B	Y	Y	Y	Y	Y		
		DMA 111	Y	Y	Y	Y	Y		
		DMA 112	Y	Y	Y	Y	Y		

NCB Package No.	DMA	Survey	Model Design	Detail Design	Joint Verification	Method of Statement	Road cutting permission	Materials Mobilization & Testing
NCB-2.11A	DMA 301	Y	Y	Y	Y	Y	Road Cutting permission obtained for some DMAs	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Float Valve; all mobilization and testing completed Deep Tube well 6 sets mobilization and testing completed.
	DMA 303	Y	Y	Y	Y	Y		
	DMA 306	Y	Y	Y	Y	Y		
	DMA 311	Y	Y	Y	Y	Y		
	DMA 320	Y	Y	Y	Y	Y		
	DMA 408	Y	Y	Y	Y	Y		

NCB Package no.	Batch no. (DMAs)		Activities performed during Jul-Dec, 2023 (Y-done; N-not done; N.A.-not applicable)						
		DMA	Survey	Model Design	Detail Design	Joint Verification	Method Statement	Road cutting permission	Materials Mobilization & Testing
NCB 2.11B	4 DMAs	DMA 305	Y	Y	Y	Y	Y	Road Cutting Permission received for DMA 305, 307, 312, 313	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Data Logger; mobilization and testing completed
		DMA 307	Y	Y	Y	Y	Y		
		DMA 312	Y	Y	Y	Y	Y		
		DMA 313	Y	Y	Y	Y	Y		

NCB Package no.	Batch no. (DMAs)		Activities performed during Jul-Dec, 2023 (Y-done; N-not done; N.A.-not applicable)						
		DMA	Survey	Model Design	Detail Design	Joint Verification	Method Statement	Road cutting permission	Materials Mobilization & Testing
NCB 2.11C Lot 1	3 DMAs	DMA 406	Y	Y	Y	Y	Y	Road cutting permission received for DMA 406, 411 & 412 Revised road cutting permission for DMA 406, 411 & 412 was received.	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Data Logger; mobilization and testing completed
		DMA 411	Y	Y	Y	Y	Y		
		DMA 412	Y	Y	Y	Y	Y		

NCB Package no.	Batch no. (DMAs)		Activities performed during Jul-Dec, 2023 (Y-done; N-not done; N.A.-not applicable)						
		DMA	Survey	Model Design	Detail Design	Joint Verification	Method Statement	Road cutting permission	Materials Mobilization & Testing
NCB 2.11C Lot 2	3 DMAs	DMA 409	Y	Y	Y	Y	Y	Applied to DNCC for Road Cutting Permission	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Data Logger; mobilization and testing completed
		DMA 413	Y	Y	Y	Y	Y		
		DMA 414	Y	Y	Y	Y	Y		

NCB Package no.	Batch no. (DMAs)		Activities performed during Jul-Dec, 2023 (Y-done; N-not done; N.A.-not applicable)						
		DMA	Survey	Model Design	Detail Design	Joint Verification	Method Statement	Road cutting permission	Materials Mobilization & Testing
NCB 2.11D Lot 1	3 DMAs	DMA 1005	Y	Y	Y	Y	Y	Road Cutting Permission received for DMA 1010. Demand note has been issued for DMA 1005 & 1011	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Data Logger; mobilization and testing completed
		DMA 1010	Y	Y	Y	Y	Y		
		DMA 1011	Y	Y	Y	Y	Y		

NCB Package no.	Batch no. (DMAs)	DMA	Survey	Model Design	Detail Design	Joint Verification	Method of Statement	Road cutting permission	Materials Mobilization & Testing
NCB 2.11D (Lot-2)	2 DMAs	DMA 1001	Y	Y	Y	Y	Y	Road Cutting permission obtained for all DMAs except the new Roads	HDPE pipe & fittings, HC pipe & fittings, Regular Valve (Gate Valve & NRV), Special Valve (PSV & ARV), Domestic Water Meter, Bulk Water Meter, Float Valve; all mobilization and testing completed Deep Tube well 6 sets mobilization and testing completed.
		DMA 1009	Y	Y	Y	Y	Y		

Annex 02: Environmental Safeguards Compliance Matrix

Package	Batch (DMAs)	Targeted pipeline length (Km)	Pipe laying (Km) till 31 December, 2023	Updated IEE (Y/N)	Disclosure (DWASA/ ADB)	Environmental Clearance from DOE (ECC)	Targeted date of Updated IEE submission
ICB 2.08	1st Batch	455.8	455.5	Y	Y	Y	NA
	2nd Batch			Y	Y	Y	NA
	3rd Batch			Y	Y	Y	NA
ICB 2.09	1st Batch	275	266.23	Y	Y	Y	NA
	2nd Batch			Y	Y	Y	NA
	3rd Batch			Y	Y	Y	NA
	4th Batch			Y	Y	Y	NA
ICB 2.10	1st Batch	474	332	Y	Y	Y	NA
	2nd Batch			Y	Y	Y	NA
	3rd Batch			Y	Y	Y	NA
	4th Batch			Y	Y	Y	NA
NCB 2.11	NCB 2.11A	29.65	25	Y	Y	Y	NA
	NCB 2.11B	94.79	60.51	Y	Y	Y	NA
	NCB 2.11C, L-1	68.84	62.1	Y	Y	Y	NA
	NCB 2.11C, L-2	66.67	33.71	Y	Y	Y	NA
	NCB 2.11D, L-1	66.80	33.21	Y	Y	Y	NA
	NCB 2.11D, L-2	48.36	30.1	Y	Y	Y	NA
NCB 2.12	NCB 2.12A	34	Yet to be started	Y	N	Y	NA
	NCB 2.12B	43		N	N	Y	15.01.2024
	NCB 2.12C	46		N	N	Y	15.01.2024
	NCB 2.12D	33		Y	N	Y	
	NCB 2.12E	33		Y	N	Y	

Annex 03: Copy of Environmental Clearance Certificate and Renewal Certificate

Government of the People's Republic of Bangladesh
Department of Environment
Paribesh Bhaban, E-16, Agargaon
Sher-e-Bangla Nagar, Dhaka-1207
www.doe.gov.bd

Environmental Clearance Certificate

Section 12 of the Environment Conservation Act, 1995 (Amended 2002)

Clearance Certificate Number: 233

File number: 22.02.0000.018.72.43.19.

Clearance Certificate Issue Date: 12 June 2019

Renewal date not later than: 11 June 2020

A. Clearance Certificate Type

Environmental Clearance Certificate

B. Clearance Certificate Holder

Project Director
Dhaka Water Supply Network Improvement Project
Dhaka WASA,WASA Bhaban (8th Floor)
98, Kazi Nazrul Islam Avenue, Kawran Bazar
Dhaka-1215.

C. Premises to which this Clearance Certificate Applies

The distribution pipelines will be laid within the RoW of Government roads. Total length of 1668 km distribution pipelines and reticulation will be laid in 29 Thana under DNCC and DSCC.

D. Activities for which this Clearance Certificate Authorizes and Regulates

The following components will be implemented through Dhaka Water Supply Network Improvement Project under Dhaka WASA -

- Survey, GIS base Network Modelling and Design, Pressure Test, Pre-commissioning, commissioning/Guarantee Tests
- Supplying and laying of 75-450 mm dia HDPE pipes (approx. 1668 km) water distribution lines by using open Trench, Pipe Bursting and Horizontal Drilling Technologies
- Installation of Service connections to approx. 156,163 households including supplying of HDPE pipes, fittings and accessories etc.
- Replacement/Up-gradation of approx. 50 Deep tubewells
- Supplies of key plant of Regular and special valves, Domestic and Bulk-Water meters and welscreen are also part of the facility.

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E. Terms and Conditions for Environmental Clearance Certificate

1. **Limit Condition for Discharges to Air and Water**: The Environmental Clearance Certificate must comply with schedule 2 and 10, rule 12 of the Environment Conservation Rules, 1997.

2. **Noise Limit**: The Environmental Clearance Certificate must comply with the Noise Pollution (Control) Rules, 2006.

In case of non-coverage of ECR 1997 the World Bank Environment, Health and Safety Guideline shall be adhered to.

3. **Operating conditions:**

3.1 Activities must be carried out in a competent manner. This includes:
(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

3.2 All plant and equipment installed at the premises or used in connection with the Environmental Clearance activity:
(a) must be maintained in a proper and efficient condition; and
(b) must be operated in a proper and efficient manner.

3.3 Construction works shall be restricted to day time hours so as to avoid/mitigate the disturbance of local lives as well as implementation schedules of the works shall be notified in advance to nearby residents.

3.4 Storage area for soils and other construction materials shall be carefully selected to avoid disturbance of the natural drainage.

3.5 This shall be ensured that soil is obtained from nearby areas, which are free of invasive plants. Re-vegetation and replanting shall be undertaken if rehabilitation works involve extensive vegetation clearance.

3.6 Vegetation clearance shall be minimizing at the construction phase as to minimize soil erosion. Soils for embankments shall be properly tested and compacted to ensure stability.

3.7 Proper construction practices shall be followed that minimize loss of habitats and fish breeding, feeding & nursery sites.

3.8 Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed project period.

3.9 In order to control noise pollution, vehicles & equipment shall be maintained regularly; working during sensitive hours and locating machinery close to sensitive receptor shall be avoided.

3.10 No solid waste can be burnt in the project area. An environment friendly solid waste management should be in place during whole the period of the project in the field.

3.11 Proper and adequate on-site precautionary measures and safety measures shall be ensured so that no habitat of any flora and fauna would be demolished or destructed.

3.12 All the required mitigation measures suggested in the EIA report are to be strictly implemented and kept operative/functioning on a continuous basis.

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3.13 Any heritage sight, ecological critical area, and other environmentally and/or religious sensitive places shall be avoided during project construction phase.

3.14 Resettlement plan should be properly implemented and people should be adequately compensated, where necessary.

3.15 Construction material should be properly disposed off after the construction work is over.

3.16 The Environmental Management Plan included in the EIA report shall strictly be implemented and kept functioning on a continuous basis.

4.1 Monitoring and Recording conditions:

4.1.1 The results of any monitoring required to be conducted by this Clearance Certificate must be recorded.

4.1.2 The following records must be kept in respect of any samples required to be collected for the purposes of this Clearance Certificate:
(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

4.2 Requirement to monitor concentration of pollutants discharged

For each monitoring, the Clearance Certificate holder must monitor (by sampling and obtaining results by analysis) the following parameter: air quality, water quality and Noise.

5. Reporting Conditions: Environmental Monitoring Reports shall be made available simultaneously to Head quarters and Dhaka Metropolitan office of the Department of Environment on a quarterly basis during the whole period of the project.

6. Notification of environmental harm: The Clearance Certificate holder or its employees must notify the Department of Environment of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident.

F. <u>Recording of pollution complaints</u>

The certificate holder must keep a legible record of all complaints made to the certificate holder or any employee or agent of the certificate holder in relation to pollution arising from any activity to which this Environmental certificate applies. The record must include details of the following:

(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;

(e) the action taken by the certificate holder in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the certificate holder, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made. The record must be produced to any authorized officer of the DOE who asks to see them.

G. Validity of the Clearance Certificate

This Environmental Clearance is valid for one year from the date of issuance and the project authority shall apply for renewal to the Dhaka Metropolitan office with a copy to Head Office of DOE at least 30 days ahead of expiry.

Violation of any of the above conditions shall render this clearance void.

12.06.19

(Syed Nazmul Ahsan)
Director (Environmental Clearance)
Phone: 8181673

Renewal Certificate

শেখ হাসিনার বাংলাদেশ
পরিচ্ছন্ন পরিবেশ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও
শেরে বাংলা নগর, ঢাকা-১২০৭।
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স্মারক নং-২২.০২.০০০০.০৯১.৭২.০৭৫.২০/নবায়ন- ৫৭ তারিখঃ ১৮/০৮/২০২০ খ্রিস্টাব্দ।

বিষয় ঃ পরিবেশগত ছাড়পত্র নবায়ন (শ্রেণীঃ লাল) প্রসঙ্গে।

সূত্র ঃ আপনার গত ২১.০৬.২০২০ তারিখের আবেদন ও অন-লাইন(৭৯৫১৯)।

উপর্যুক্ত বিষয় ও সূত্রের প্রেক্ষিতে জানানো যাচ্ছে যে, আপনার আবেদন, দাখিলকৃত অন্যান্য কাগজপত্র ও সরেজমিন পরিদর্শন প্রতিবেদন যাচাই বাছাই করে ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি), ঢাকা ওয়াসা অনুকূলে ইস্যুকৃত পরিবেশগত ছাড়পত্রের নবায়নের কপি অন-লাইনে প্রদান করা হয়েছে, যার সনাক্তকরণ নম্বর-৭৯৫১৯। উল্লেখ্য অন-লাইনে উদ্যোক্তার আইডি দিয়ে লগইন করে পরিবেশগত ছাড়পত্রের নবায়নের কপি ডাউনলোড করে প্রিন্ট করা যাবে। ডিজিটাল ছাড়পত্র একটি সিস্টেম জেনারেটেড ছাড়পত্র হওয়ায় এতে কোন স্বাক্ষরের প্রয়োজন নেই।

১৮.০৮.২০২০
(ড. মুঃ সোহরাব আলি)
পরিচালক
ফোন ঃ ৮১৮১৭৮৯
Email: dhakametro@doe.gov.bd

জনাব মোঃ আখতারুজ্জামান
অতিরিক্ত প্রধান প্রকৌশলী
ও
প্রকল্প পরিচালক
ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক
ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)
ঢাকা ওয়াসা
৯৮, কাজী নজরুল ইসলাম এভিনিউ
কাওরান বাজার, ঢাকা-১২১৫।

অনুলিপিঃ অবগতির জন্যঃ
১। সহকারী পরিচালক, মহাপরিচালক মহোদয়ের শাখা, পরিবেশ অধিদপ্তর, ঢাকা।

Draft

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও, ঢাকা ১২০৭
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পরিবেশগত ছাড়পত্র নবায়ন

ছাড়পত্র নং: ২০-৪৩২৫১

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে পরিবেশগত ছাড়পত্র নবায়ন প্রদান করা হলো :

প্রতিষ্ঠান/প্রকল্পের নাম	: Dhaka water supply Network Improvement project
উদ্যোক্তার নাম	: Dhaka Water Supply And Sewerage Authority
সনাক্তকরণ নং	: ৭৯৫১৯
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম	: Water, power and gas distribution line laying/relaying/extension
প্রতিষ্ঠান/প্রকল্পের শ্রেণী	: Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা	: project director,Dhaka WASA, WASA Bhaban (8th floor), 98, Kazi Nazrul Islam Avenue, Kawran Bazar, Dhaka-1215,Tejgaon,Dhaka
প্রদানের তারিখ	: 18.08.2020
মেয়াদ উত্তীর্ণের তারিখ	: 12.06.2021

ছাড়পত্রটি যাচাই করতে ভিজিট করুন: http://ecc.doe.gov.bd/certificate_verification

সনাক্তকরণ নং: ৭৯৫১৯ Dhaka water supply Network Improvement project ছাড়পত্র নং: ২০-৪৩২৫১

Draft

পরিবেশগত ছাড়পত্র নবায়ন জন্য প্রযোজ্য শর্তাবলী:

১. এ ছাড়পত্র শুধুমাত্র ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)-এর ক্ষেত্রে প্রযোজ্য হবে।

২. বর্ণিত প্রকল্পের অনুকূলে পরিবেশ অধিদপ্তরের বিগত ১২.০৬.২০১৯ তারিখ নং-২২.০২.০০০০.০১৮.৭২.৪৩.১৯.২৩৩ সংখ্যক স্মারকে প্রদত্ত পরিবেশগত ছাড়পত্রের সকল শর্ত অপরিবর্তীত থাকবে।

৩. প্রকল্পের কার্যক্রম দ্বারা কোন অবস্থায় রাস্তায় যানজট সৃষ্টি করা যাবেনা। এ বিষয়ে বিকল্প ব্যবস্থাপনা সার্বক্ষণিক কার্যকর রাখতে হবে।

৪. প্রকল্পের এলাইনমেন্টে যানজট নিয়ন্ত্রণের জন্য নিজস্ব জনবল দ্বারা সার্বক্ষণিক যানজট নিয়ন্ত্রনের জন্য কার্যকর উদ্যোগ গ্রহণ করতে হবে।

৫. কোন অবস্থায় প্রকল্পের কার্যক্রম দ্বারা কোন জলাজয়, ডোবা, নালা, বিল, খাল, পুকুর, বন্যা প্রবাহ এলাকা, ওয়াটার রিটেনশন এরিয়া ভরাট করা যাবেনা।

৬. প্রকল্পের কার্যক্রম বাস্তবায়নের সময় রাস্তা খোড়া-খোঁড়ি করার সময় তাৎক্ষণিকভাবে রাস্তার মাটি নিরাপদে অপসারণ করতে হবে এবং কোন মাটি/বালি উন্মুক্ত অবস্থায় রাখা যাবেনা যাতে রোদে ডাষ্ট উত্থিত হয়ে বায়ু দূষণ না হয় এবং বৃষ্টির পানিতে স্ট্রম ওয়াটারের সাথে মিশে রাস্তা সংলগ্ন ড্রেনেজ ব্লক সৃষ্টি হয়ে জলাবদ্ধা সৃষ্টি না করে।

৭. প্রকল্পের পাশের রাস্তায় কোন ধরনের নির্মাণ সামগ্রী রেখে ফুটপাত/রাস্তার প্রতিবন্ধকতা সৃষ্টি করা যাবেনা।

৮. প্রকল্পের কার্যক্রম দ্বারা পরিবেশ ও প্রতিবেশের ক্ষতিসাধন করা হলে Polluters Pay Principle অনুসারে ক্ষতিপূরণ ধার্য করে নির্ধারিত সময়ের মধ্যে ধার্যকৃত ক্ষতিপুরণ আদায় করা হবে।

৯. মহামান্য হাইকোর্ট বিভাগের রিট পিটিশন নম্বর ৯১৬/২০১৯ এর বিগত ২৯/০১/২০১৯ তারিখের আদেশ অনুযায়ী প্রকল্প নির্মাণকালে বায়ু/ডাষ্ট দূষণ নিয়ন্ত্রণকল্পে দৈনিক অন্ততঃ দুইবার পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১০. প্রকল্পের কার্যক্রমের মাধ্যমে কোন প্রকার বায়ু/শব্দ দূষণ সৃষ্টি করা যাবেনা। নির্মাণ কাজ চলাকালিন নির্মাণাধীন অবকাঠামো/বালু/মাটি যথাযথভাবে ঢেকে রাখতে হবে যাতে ধূলাবালি আশেপাশে ছড়িয়ে না পড়ে।

১১. প্রকল্পের কাজ শেষ হওয়ার সাথে সাথে তাৎক্ষণিকভাবে খোঁড়া-খোঁড়িকৃত রাস্তা পূর্বের অবস্থায় ফিরিয়ে আনতে হবে। এ বিষয়ে সংশ্লিষ্ট ঠিকাদারী প্রতিষ্ঠানকে প্রয়োজনীয় নির্দেশনা প্রদান করতে হবে। পরিবেশগত বিষয়াদি যথাযথভাবে বাস্তবায়ন করার জন্যও ঠিকাদারী প্রতিষ্ঠানকে নির্দেশনা প্রদান করতে হবে।

১২. বায়ুদূষণ নিয়ন্ত্রণের জন্য নির্মাণ সামগ্রী ঢেকে রাখতে হবে এবং নির্মাণ সামগ্রী পরিবহনের সময়ও ঢেকে পরিবহণ করতে হবে।

১৩. নির্মাণাধীন অবকাঠামো/প্রকল্পের এলাইনম্যান্ট এলাকায় নিয়মিত পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১৪. প্রকল্পের নির্মাণ কার্যক্রম চলাকালে শব্দ নিঃসরণ/নির্গমন মাত্রা শব্দ দূষণ (নিয়ন্ত্রণ) বিধিমালা, ২০০৬ এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭-এ বর্ণিত মানমাত্রার মধ্যে রাখতে হবে।

১৫. সব ধরণের বর্জ্যরে ক্ষেত্রে বিশেষতঃ কঠিন বর্জ্য ব্যবস্থাপনায়, উৎসে বর্জ্য পৃথকীকরণ করতে হবে এবং বর্জ্য হ্রাস, পুনঃব্যবহার ও পুনঃচক্রায়ন নীতিমালা তথা 3R(Reduce, Reuse, Recycle) Principles অনুসরণ করতে হবে। এছাড়া পৃথকীকৃত বর্জ্য আবৃত অবস্থায় উপযুক্ত সময় নিকটস্থ সিটি কর্পোরেশনের ট্রান্সফার ষ্টেশন/ডাম্পিং গ্রাউন্ডে স্থানান্তর/পরিবহনের বিষয়টি উদ্যোক্তা নিজস্ব উদ্যোগ/সিটি কর্পোরেশনের সহায়তায় নিশ্চিত করবেন।

১৬. নির্মাণকাজ চলাকালে শ্রমিকদের পেশাগত স্বাস্থ্য সুরক্ষা সামগ্রী (পিপিই যেমন ইয়ার প্লাগ, নোজ মাস্ক ইত্যাদি) সার্বক্ষণিকভাবে ব্যবহার করতে হবে।

১৭. পরিবেশগত ছাড়পত্র ও সর্বশেষ নবায়নের কপি প্রকল্প অফিসে সংরক্ষণ করতে হবে।

১৮. ছাড়পত্র নবায়নের মেয়াদ শেষ হবার অন্ততঃ ত্রিশ দিন পূর্বে প্রাসঙ্গিক কাগজপত্রসহ অন-লাইনে নবায়নের জন্য আবেদন করতে হবে।

১৯. উপর্যুক্ত শর্ত এবং অবস্থান বিষয়ক পরিবেশগত ছাড়পত্রের প্রদত্ত অন্যান্য শর্তাবলী প্রতিপালনে ব্যর্থ হলে ছাড়পত্র বাতিল বলে গণ্য হবে এবং বাংলাদেশ পরিবেশ সংরক্ষণ আইন, ১৯৯৫ (সংশোধিত-২০১০) এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭ অনুযায়ী আইনগত ব্যবস্থা গ্রহণ করা হবে।

Second Renewal Copy

শেখ হাসিনার বাংলাদেশ
পরিচ্ছন্ন পরিবেশ

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও
শেরে বাংলা নগর, ঢাকা-১২০৭।
www.doe.gov.bd

স্মারক নং-২২.০২.০০০০.০৯১.৭২.০৭৫.২০/নবায়ন-৬০ তারিখ: ৩০/৫/২০২১ খ্রিস্টাব্দ।

বিষয় ঃ পরিবেশগত ছাড়পত্র নবায়ন (শ্রেণীঃ লাল) প্রসঙ্গে।

সূত্র ঃ আপনার গত ১৪.০৬.২০২১ তারিখের আবেদন ও অন-লাইন(৭৯৫১৯)।

উপর্যুক্ত বিষয় ও সূত্রের প্রেক্ষিতে জানানো যাচ্ছে যে, আপনার আবেদন, দাখিলকৃত অন্যান্য কাগজপত্র ও সরেজমিন পরিদর্শন প্রতিবেদন যাচাই বাছাই করে ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি), ঢাকা ওয়াসা অনুকূলে ইস্যুকৃত পরিবেশগত ছাড়পত্রের নবায়নের কপি অন-লাইনে প্রদান করা হয়েছে, যার সনাক্তকরণ নম্বর-৭৯৫১৯। উল্লেখ্য অন-লাইনে উদ্যোক্তার আইডি দিয়ে লগইন করে পরিবেশগত ছাড়পত্রের নবায়নের কপি ডাউনলোড করে প্রিন্ট করা যাবে। ডিজিটাল ছাড়পত্র একটি সিস্টেম জেনারেটেড ছাড়পত্র হওয়ায় এতে কোন স্বাক্ষরের প্রয়োজন নেই।

১৭.০৪.২১

জনাব মোঃ আখতারুজ্জামান
অতিরিক্ত প্রধান প্রকৌশলী
ও
প্রকল্প পরিচালক
ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক
ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)
ঢাকা ওয়াসা
৯৮, কাজী নজরুল ইসলাম এভিনিউ
কাওরান বাজার, ঢাকা-১২১৫।

(মোহাম্মদ আসাদুল হক)
পরিচালক(উপসচিব)
ফোন: ৮১৮১৭৮৯
Email: dhakametro@doe.gov.bd

অনুলিপি অবগতির জন্যঃ
১। সহকারী পরিচালক, মহাপরিচালক মহোদয়ের শাখা, পরিবেশ অধিদপ্তর, ঢাকা।

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও, ঢাকা ১২০৭
www.doe.gov.bd

পরিবেশগত ছাড়পত্র নবায়ন

ছাড়পত্র নং: ২১-৬০৩১১

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে পরিবেশগত ছাড়পত্র নবায়ন প্রদান করা হলো :

প্রতিষ্ঠান/প্রকল্পের নাম	:	Dhaka water supply Network Improvement project
উদ্যোক্তার নাম	:	Dhaka Water Supply And Sewerage Authority
সনাক্তকরণ নং	:	৭৯৫১৯
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম	:	Water, power and gas distribution line laying/relaying/extension
প্রতিষ্ঠান/প্রকল্পের শ্রেণী	:	Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা	:	project director,Dhaka WASA, WASA Bhaban (8th floor), 98, Kazi Nazrul Islam Avenue, Kawran Bazar, Dhaka-1215,Tejgaon,Dhaka
প্রদানের তারিখ	:	30.06.2021
মেয়াদ উত্তীর্ণের তারিখ	:	12.06.2022

এ ছাড়পত্র সনদের সাথে পৃথকভাবে সংযুক্ত প্রদত্ত শর্তাবলী যথাযথভাবে প্রতিপালন করতে হবে, অন্যথায় ছাড়পত্র বাতিল/ক্ষতিপূরণ আদায়সহ যে কোন আইনানুগ ব্যবস্থা গ্রহণ করা হবে।

বিঃদ্রঃ এটি একটি সিস্টেম জেনারেটেড ছাড়পত্র এবং এতে কোনোরূপ স্বাক্ষরের প্রয়োজন নেই।

ছাড়পত্রটি যাচাই করতে ভিজিট করুন: http://ecc.doe.gov.bd/certificate_verification

Page 1 of 2

সনাক্তকরণ নং: ৭৯৫১৯ Dhaka water supply Network Improvement project ছাড়পত্র নং: ২১-৬০৩১১

পরিবেশগত ছাড়পত্র নবায়ন জন্য প্রযোজ্য শর্তাবলী:

১ . এ ছাড়পত্র শুধুমাত্র ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রুভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)-এর ক্ষেত্রে প্রযোজ্য হবে।

২ . বর্ণিত প্রকল্পের অনুকূলে পরিবেশ অধিদপ্তরের বিগত ১২.০৬.২০১৯ তারিখ নং-২২.০২.০০০০.০১৮.৭২.৪৩.১৯.২৩৩ সংখ্যক স্মারকে প্রদত্ত পরিবেশগত ছাড়পত্রের সকল শর্ত অপরিবর্তীত থাকবে।

৩ . প্রকল্পের কার্যক্রম দ্বারা কোন অবস্থায় রাস্তায় যানজট সৃষ্টি করা যাবেনা। এ বিষয়ে বিকল্প ব্যবস্থাপনা সার্বক্ষণিক কার্যকর রাখতে হবে।

৪ . প্রকল্পের এলাইনমেন্টে যানজট নিয়ন্ত্রণের জন্য নিজস্ব জনবল দ্বারা সার্বক্ষণিক যানজট নিয়ন্ত্রণের জন্য কার্যকর উদ্যোগ গ্রহণ করতে হবে।

৫ . কোন অবস্থায় প্রকল্পের কার্যক্রম দ্বারা কোন জলাজয়, ডোবা, নালা, বিল, খাল, পুকুর, বন্যা প্রবাহ এলাকা, ওয়াটার রিটেনশন এরিয়া ভরাট করা যাবেনা।

৬ . প্রকল্পের কার্যক্রম বাস্তবায়নের সময় রাস্তা খোড়া-খোঁড়ি করার সময় তাৎক্ষণিকভাবে রাস্তার মাটি নিরাপদে অপসারণ করতে হবে এবং কোন মাটি/বালি উন্মুক্ত অবস্থায় রাখা যাবেনা যাতে রোদে ডাষ্ট উত্থিত হয়ে বায়ু দূষণ না হয় এবং বৃষ্টির পানিতে স্টীম ওয়াটারের সাথে মিশে রাস্তা সংলগ্ন ড্রেনেজ বণ্ড সৃষ্টি হয়ে জলাবদ্ধতা সৃষ্টি না করে।

৭ . প্রকল্পের পাশের রাস্তায় কোন ধরনের নির্মাণ সামগ্রী রেখে ফুটপাত/রাস্তার প্রতিবন্ধকতা সৃষ্টি করা যাবেনা।

৮ . প্রকল্পের কার্যক্রম দ্বারা পরিবেশ ও প্রতিবেশের ক্ষতিসাধন করা হলে Polluters Pay Principle অনুসারে ক্ষতিপূরণ ধার্য করে নির্ধারিত সময়ের মধ্যে ধার্যকৃত ক্ষতিপূরণ আদায় করা হবে।

৯ . মহামান্য হাইকোর্ট বিভাগের রিট পিটিশন নম্বর ৯১৬/২০১৯ এর বিগত ২৯/০১/২০১৯ তারিখের আদেশ অনুযায়ী প্রকল্প নির্মাণকালে বায়ু/ডাষ্ট দূষণ নিয়ন্ত্রণকল্পে দৈনিক অন্ততঃ দুইবার পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১০ . প্রকল্পের কার্যক্রমের মাধ্যমে কোন প্রকার বায়ু/শব্দ দূষণ সৃষ্টি করা যাবেনা। নির্মাণ কাজ চলাকালিন নির্মাণাধীন অবকাঠামো/বালু/মাটি যথাযথভাবে ঢেকে রাখতে হবে যাতে ধূলাবালি আশেপাশে ছড়িয়ে না পড়ে।

১১ . প্রকল্পের কাজ শেষ হওয়ার সাথে সাথে তাৎক্ষণিকভাবে খোঁড়া-খোঁ ড়কৃত রাস্তা পূর্বের অবস্থায় ফিরিয়ে আনতে হবে।

১২ . বায়ুদূষণ নিয়ন্ত্রণের জন্য নির্মাণ সামগ্রী ঢেকে রাখতে হবে এবং নির্মাণ সামগ্রী পরিবহনের সময়ও ঢেকে পরিবহণ করতে হবে।

১৩ . নির্মাণাধীন অবকাঠামো/প্রকল্পের এলাইনম্যান্ট এলাকায় নিয়মিত পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১৪ . প্রকল্পের নির্মাণ কার্যক্রম চলাকালে শব্দ নিঃসরণ/নির্গমন মাত্র শব্দ দূষণ (নিয়ন্ত্রণ) বিধিমালা, ২০০৬ এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭-এ বর্ণিত মানমাত্রার মধ্যে রাখতে হবে।

১৫ . সব ধরণের বর্জ্যের ক্ষেত্রে বিশেষতঃ কঠিন বর্জ্য ব্যবস্থাপনায়, উৎসে বর্জ্য পৃথকীকরণ করতে হবে এবং বর্জ্য হ্রাস, পুনঃব্যবহার ও পুনঃচক্রায়ন নীতিমালা তথা 3R(Reduce, Reuse, Recycle) Principles অনুসরণ করতে হবে। এছাড়া পৃথকীকৃত বর্জ্য আবৃত অবস্থায় উপযুক্ত সময় নিকটস্থ সিটি কর্পোরেশনের ট্রান্সফার ষ্টেশন/ডাম্পিং গ্রাউন্ডে হস্তান্তর/পরিবহনের বিষয়টি উদ্যোক্তা নিজস্ব উদ্যোগে/সিটি কর্পোরেশনের সহায়তায় নিশ্চিত করবেন।

১৬ . নির্মাণকাজ চলাকালে শ্রমিকদের পেশাগত স্বাস্থ্য সুরক্ষা সামগ্রী (পিপিই যেমন ইয়ার প্লাগ, নোজ মাস্ক ইত্যাদি) সার্বক্ষণিকভাবে ব্যবহার করতে হবে।

১৭ . পরিবেশগত ছাড়পত্র ও সর্বশেষ নবায়নের কপি প্রকল্প অফিসে সংরক্ষণ করতে হবে।

১৮ . ছাড়পত্র নবায়নের মেয়াদ শেষ হবার অন্ততঃ ত্রিশ দিন পূর্বে প্রাসঙ্গিক কাগজপত্রসহ অন-লাইনে নবায়নের জন্য আবেদন করতে হবে।

১৯ . উপর্যুক্ত শর্ত এবং অবস্থান বিষয়ক পরিবেশগত ছাড়পত্রের প্রদত্ত অন্যান্য শর্তাবলী প্রতিপালনে ব্যর্থ হলে ছাড়পত্র বাতিল বলে গণ্য হবে এবং বাংলাদেশ পরিবেশ সংরক্ষণ আইন, ১৯৯৫ (সংশোধিত-২০১০) এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭ অনুযায়ী আইনগত ব্যবস্থা গ্রহণ করা হবে।

3rd Renewal Application Copy

DHAKA WATER SUPPLY NETWORK IMPROVEMENT PROJECT
Dhaka Water Supply & Sewerage Authority
WASA BHABAN
98, Kazi Nazrul Islam Avenue (8th Floor), Kawran Bazar, Dhaka-1215.
Phone: 880-2-9116033, Fax: 880-2-9116086
Website: www.dwsnip-dwasa.com

WASA

শেখ হাসিনার মূলনীতি
গ্রাম শহরের উন্নতি

Memo No: 46.113.624.00.00.G-06/DWSNIP/744 Date: 14/06/2022

পরিচালক
ঢাকা মহানগর
পরিবেশ অধিদপ্তর
পরিবেশ ভবন, ই-১৬, আগারগাঁও
শেরে বাংলা নগর, ঢাকা-১২০৭।

পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
প্রাপ্তি স্বীকার
নং ... ৪৪২
স্বাক্ষর ...
তাং ... ২৩/০৬/২০২২

বিষয়ঃ ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রুভমেন্ট প্রজেক্ট এর পরিবেশগত ছাড়পত্রের নবায়ন প্রসঙ্গে।

সূত্রঃ পরিবেশ অধিদপ্তরের স্মারক নং- ২২.০২.০০০০.০৮১.৭২.৭৫.২০.নবায়ন-৬০, তারিখ-৩০.০৬.২০২১।

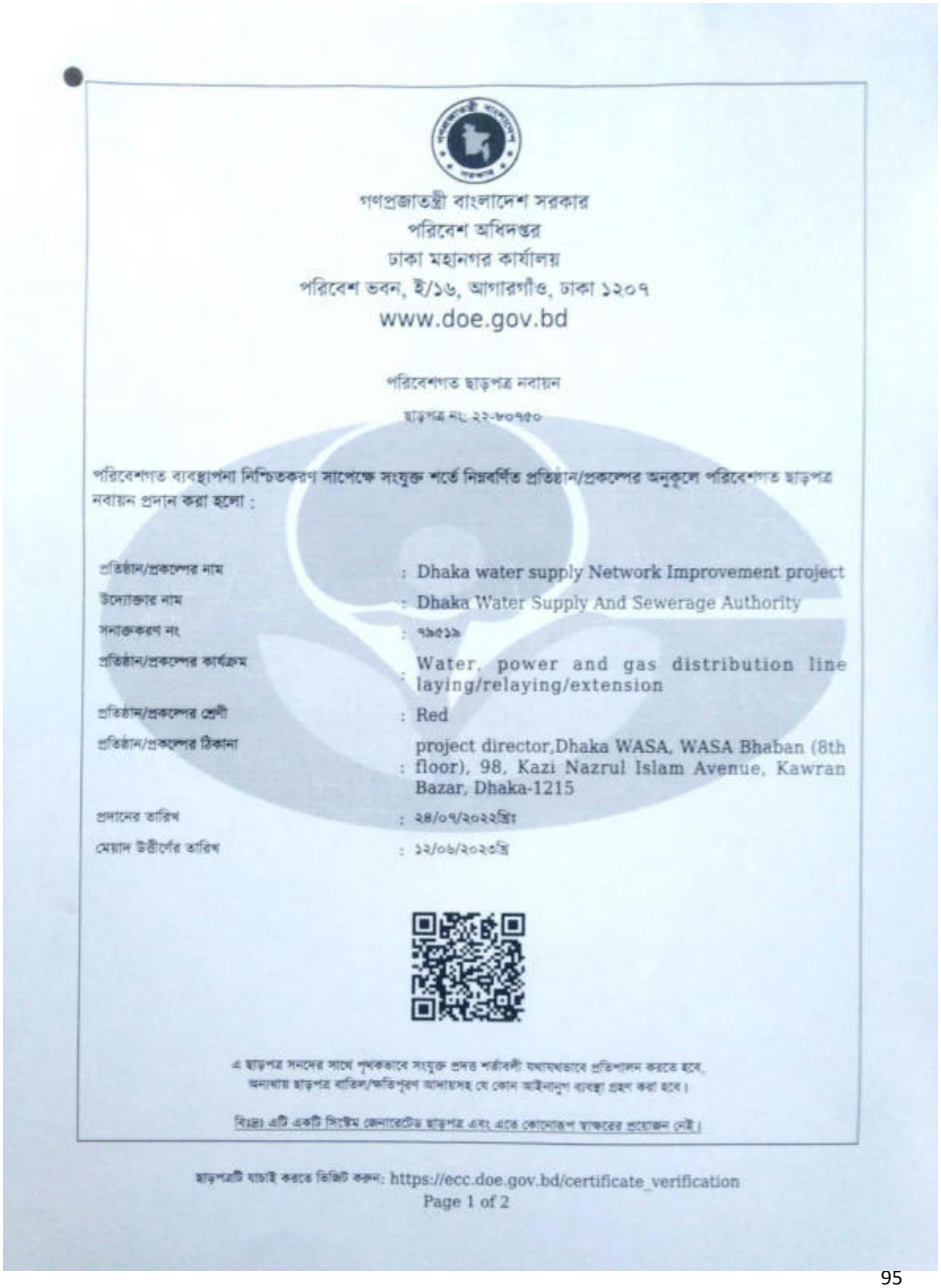
উপর্যুক্ত বিষয় ও সূত্রের প্রেক্ষিতে জানানো যাচ্ছে যে, এডিবি সাহায্যপুষ্ট ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রুভমেন্ট প্রজেক্ট ঢাকা ওয়াসার আওতাধীন সরকারের একটি অগ্রাধিকার প্রকল্প। অত্র প্রকল্পের আওতায় ঢাকা শহরের অন্তর্ভুক্ত এলাকা যথা-উত্তরা, শ্যামলী, মোহাম্মদপুর, লালবাগ, আজিমপুর, হাজারীবাগ, বংশাল, সূত্রাপুর, দনিয়া, শনির আখড়া, যাত্রাবাড়ী ও সংশ্লিষ্ট এলাকার পুরাতন জরাজীর্ণ পানির লাইন পরিবর্তনসহ গ্রাহকগণকে নতুন পানি সংযোগ প্রদানের মাধ্যমে ৮২ (বিরাশি) টি District Metered Area (DMA) প্রতিষ্ঠার কাজ করা হবে। অত্র প্রকল্পের পরিবেশগত ছাড়পত্র প্রাপ্তির লক্ষ্যে গত ২১/০৬/২০২০ তারিখ পরিবেশ অধিদপ্তর বরাবরে আবেদন করা হয়। উক্ত আবেদনের প্রেক্ষিতে সূত্রস্থ স্মারক মোতাবেক ০১ (এক) বছর মেয়াদী পরিবেশগত ছাড়পত্র ইস্যু করা হয়। কিন্তু ইস্যুকৃত পরিবেশগত ছাড়পত্র এর মেয়াদ গত ১২/০৬/২০২২ তারিখ শেষ হবে বিধায় তা নবায়ন করা প্রয়োজন। পরিবেশগত ছাড়পত্র নবায়নের জন্য ছাড়পত্রের আবেদন ফি'র উপর আরোপিত ২৫% বাৎসরিক নবায়ন ফি বাবদ ১,২৫,০০০/- টাকা (কোড নং-১-৪৫৪১-০০০০-২৬৮১) এবং সরকার কর্তৃক আরোপকৃত ১৫% ভ্যাট বাবদ ১৮৭৫০/- টাকা (কোড নং-১-১১৩৩-০০৩৫-০৩১১)-এ ট্রেজারী চালানের মাধ্যমে জমা প্রদান করে অনলাইন আবেদন পত্র পূরণ পূর্বক হার্ডকপি এতদসঙ্গে সংযুক্ত করা হ'ল।

এমতাবস্থায়, "Dhaka Water Supply Network Improvement Project" এর পরিবেশগত ছাড়পত্র ইস্যু নবায়ন করার জন্য আপনাকে বিশেষভাবে অনুরোধ করা হ'ল।

সংযুক্তঃ
(ক) পরিবেশগত ছাড়পত্রের অনুলিপি;
(খ) Received copy of the letter for sending Quarterly Environment Monitoring Report (July to September 21);
(গ) Received copy of the letter for sending Quarterly Environment Monitoring Report (October to December 21);
(ঘ) Quarterly Environment Monitoring Report (January to March 22);
(ঙ) বিধিমোতাবেক আলোকে পরিবেশগত ছাড়পত্র নবায়ন ফি এর চালান (চালান নং T-2, তারিখ-১৫/০৬/২০২২, সোনালী ব্যাংক লিমিটেড,কাওরান বাজার মার্কেট শাখা, ঢাকা);
(চ) পরিবেশগত ছাড়পত্র নবায়ন ফি এর উপর আরোপিত ১৫% ভ্যাট (চালান নং T-1, তারিখ-১৫/০৬/২০২২, সোনালী ব্যাংক লিমিটেড,কাওরান বাজার মার্কেট শাখা, ঢাকা);
(ছ) অন-লাইন আবেদনের কপি;

মোঃ আব্দুল লতিফ
তত্ত্বাবধায়ক প্রকৌশলী ও
প্রকল্প পরিচালক
ডিডব্লিউএসএনআইপি, ঢাকা ওয়াসা।

অনুলিপিঃ
১. মহাপরিচালক, পরিবেশ অধিদপ্তর, ঢাকা।
২. পরিচালক (উন্নয়ন), ঢাকা ওয়াসা।
৩. উপ-প্রকল্প পরিচালক, ডিডব্লিউএসএনআইপি, ঢাকা ওয়াসা।
৪. নির্বাহী প্রকৌশলী, ডিডব্লিউএসএনআইপি, ঢাকা ওয়াসা।



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও, ঢাকা ১২০৭
www.doe.gov.bd

পরিবেশগত ছাড়পত্র নবায়ন

ছাড়পত্র নং: ২২-৮০৭৫০

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে পরিবেশগত ছাড়পত্র নবায়ন প্রদান করা হলো :

প্রতিষ্ঠান/প্রকল্পের নাম	:	Dhaka water supply Network Improvement project
উদ্যোক্তার নাম	:	Dhaka Water Supply And Sewerage Authority
সনাক্তকরণ নং	:	৭৯৫১৯
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম	:	Water, power and gas distribution line laying/relaying/extension
প্রতিষ্ঠান/প্রকল্পের শ্রেণী	:	Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা	:	project director,Dhaka WASA, WASA Bhaban (8th floor), 98, Kazi Nazrul Islam Avenue, Kawran Bazar, Dhaka-1215
প্রদানের তারিখ	:	২৪/০৭/২০২২খ্রিঃ
মেয়াদ উত্তীর্ণের তারিখ	:	১২/০৬/২০২৩খ্রি

এ ছাড়পত্র সনদের সাথে পৃথকভাবে সংযুক্ত প্রদত্ত শর্তাবলী যথাযথভাবে প্রতিপালন করতে হবে, অন্যথায় ছাড়পত্র বাতিল/ক্ষতিপূরণ আদায়সহ যে কোন আইনানুগ ব্যবস্থা গ্রহণ করা হবে।

বিঃদ্রঃ এটি একটি সিস্টেম জেনারেটেড ছাড়পত্র এবং এতে কোনোরূপ স্বাক্ষরের প্রয়োজন নেই।

ছাড়পত্রটি যাচাই করতে ভিজিট করুন: https://ecc.doe.gov.bd/certificate_verification
Page 1 of 2

সনাক্তকরণ নং: ৭৯৫১৯ Dhaka water supply Network Improvement project ছাড়পত্র নং: ২২-৮০৭৫০

পরিবেশগত ছাড়পত্র নবায়ন এর জন্য প্রযোজ্য শর্তাবলী:

১. এ ছাড়পত্র শুধুমাত্র ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)-এর ক্ষেত্রে প্রযোজ্য হবে।

২. বর্ণিত প্রকল্পের অনুকূলে পরিবেশ অধিদপ্তরের বিগত ১২.০৬.২০১৯ তারিখ নং-২২.০২.০০০০.০১৮.৭২.৪৫.১৯.২৩৩ সংখ্যক স্মারকে প্রদত্ত পরিবেশগত ছাড়পত্রের সকল শর্ত অপরিবর্তীত থাকবে।

৩. প্রকল্পের কার্যক্রম দ্বারা কোন অবস্থায় রাস্তায় যানজট সৃষ্টি করা যাবেনা। এ বিষয়ে বিকল্প ব্যবস্থাপনা সার্বক্ষণিক কার্যকর রাখতে হবে।

৪. প্রকল্পের এলাইনমেন্টে যানজট নিয়ন্ত্রণের জন্য নিজস্ব জনবল দ্বারা সার্বক্ষণিক যানজট নিয়ন্ত্রণের জন্য কার্যকর উদ্যোগ গ্রহণ করতে হবে।

৫. কোন অবস্থায় প্রকল্পের কার্যক্রম দ্বারা কোন জলাজয়, ডোবা, নালা, বিল, খাল, পুকুর, বন্যা প্রবাহ এলাকা, ওয়াটার রিটেনশন এরিয়া ভরাট করা যাবেনা।

৬. প্রকল্পের কার্যক্রম বাস্তবায়নের সময় রাস্তা খোড়া-খোঁড়ি করার সময় তাৎক্ষণিকভাবে রাস্তার মাটি নিরাপদে অপসারণ করতে হবে এবং কোন মাটি/বালি উন্মুক্ত অবস্থায় রাখা যাবেনা যাতে রোদে ডাষ্ট উত্থিত হয়ে বায়ু দূষণ না হয় এবং বৃষ্টির পানিতে ড্রেন ওয়াটারের সাথে মিশে রাস্তা সংলগ্ন ড্রেনেজ ব্লক সৃষ্টি হয়ে জলাবদ্ধা সৃষ্টি না করে।

৭. প্রকল্পের পাশের রাস্তায় কোন ধরনের নির্মাণ সামগ্রী রেখে ফুটপাত/রাস্তার প্রতিবন্ধকতা সৃষ্টি করা যাবেনা।

৮. প্রকল্পের কার্যক্রম দ্বারা পরিবেশ ও প্রতিবেশের ক্ষতিসাধন করা হলে Polluters Pay Principle অনুসারে ক্ষতিপূরণ ধার্য করে নির্ধারিত সময়ের মধ্যে ধার্যকৃত ক্ষতিপূরণ আদায় করা হবে।

৯. মহামান্য হাইকোর্ট বিভাগের রিট পিটিশন নম্বর ৯১৬/২০১৯ এর বিগত ২৯/০১/২০১৯ তারিখের আদেশ অনুযায়ী প্রকল্প নির্মাণকালে বায়ু/ডাষ্ট দূষণ নিয়ন্ত্রণকল্পে দৈনিক অন্ততঃ দুইবার পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১০. প্রকল্পের কার্যক্রমের মাধ্যমে কোন প্রকার বায়ু/শব্দ দূষণ সৃষ্টি করা যাবেনা। নির্মাণ কাজ চলাকালিন নির্মাণাধীন অবকাঠামো/বালু/মাটি যথাযথভাবে ঢেকে রাখতে হবে যাতে ধুলাবালি আশেপাশে ছড়িয়ে না পড়ে।

১১. প্রকল্পের কাজ শেষ হওয়ার সাথে সাথে তাৎক্ষণিকভাবে খোঁড়া-খোঁ ড়কৃত রাস্তা পূর্বের অবস্থায় ফিরিয়ে আনতে হবে।

১২. বায়ুদূষণ নিয়ন্ত্রণের জন্য নির্মাণ সামগ্রী ঢেকে রাখতে হবে এবং নির্মাণ সামগ্রী পরিবহনের সময়ও ঢেকে পরিবহণ করতে হবে।

১৩. নির্মাণাধীন অবকাঠামো/প্রকল্পের এলাইনম্যাণ্ট এলাকায় নিয়মিত পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১৪. প্রকল্পের নির্মাণ কার্যক্রম চলাকালে শব্দ নিয়ন্ত্রণ/নিয়ন্ত্রিত মাত্রা শব্দ দূষণ (নিয়ন্ত্রণ) বিধিমালা, ২০০৬ এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭-এ বর্ণিত মানমাত্রার মধ্যে রাখতে হবে।

১৫. সব ধরণের বর্জ্যের ক্ষেত্রে বিশেষতঃ কঠিন বর্জ্য ব্যবস্থাপনায়, উৎসে বর্জ্য পৃথকীকরণ করতে হবে এবং বর্জ্য হ্রাস, পুনঃব্যবহার ও পুনঃচক্রায়ন নীতিমালা তথা 3R(Reduce, Reuse, Recycle) Principles অনুসরণ করতে হবে। এছাড়া পৃথকীকৃত বর্জ্য আবৃত অবস্থায় উপযুক্ত সময় নিকটস্থ সিটি কর্পোরেশনের ট্রান্সফার ষ্টেশন/ডাম্পিং গ্রাউন্ডে হ্যানান্তর/পরিবহনের বিষয়টি উদ্যোক্তা নিজস্ব উদ্যোগ/সিটি কর্পোরেশনের সহায়তায় নিশ্চিত করবেন।

১৬. নির্মাণকাজ চলাকালে শ্রমিকদের পেশাগত স্বাস্থ্য সুরক্ষা সামগ্রী (পিপিই যেমন ইয়ার প্লাগ, নোজ মাস্ক ইত্যাদি) সার্বক্ষণিকভাবে ব্যবহার করতে হবে।

১৭. পরিবেশগত ছাড়পত্র ও সর্বশেষ নবায়নের কপি প্রকল্প অফিসে সংরক্ষণ করতে হবে।

১৮. ছাড়পত্র নবায়নের মেয়াদ শেষ হবার অন্ততঃ ত্রিশ দিন পূর্বে প্রাসঙ্গিক কাগজপত্রসহ অন-লাইনে নবায়নের জন্য আবেদন করতে হবে।

১৯. উপর্যুক্ত শর্ত এবং অবস্থান বিষয়ক পরিবেশগত ছাড়পত্রের প্রদত্ত অন্যান্য শর্তাবলী প্রতিপালনে ব্যর্থ হলে ছাড়পত্র বাতিল বলে গণ্য হবে এবং বাংলাদেশ পরিবেশ সংরক্ষণ আইন, ১৯৯৫ (সংশোধিত-২০১০) এবং পরিবেশ সংরক্ষণ বিধিমালা, ১৯৯৭ অনুযায়ী আইনগত ব্যবস্থা গ্রহণ করা হবে।

4th renewal Application

পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
গৃহীত হলো
নং: নবা: ৩৬০
স্বাক্ষর
তারিখ: ২২/৬/২৩

ফরম-৫
পরিবেশগত ছাড়পত্র ছাড়পত্র নবায়নের আবেদনপত্র
[বিধি ২২ এর উপ-বিধি (১) দ্রষ্টব্য]

বরাবর,
পরিচালক
ঢাকা মহানগর, পরিবেশ অধিদপ্তর
পরিবেশ ভবন, ই-৬, আগারগাঁও, শেরে বাংলা নগর, ঢাকা-১২০৭।

জনাব,

আমি আমার বিদ্যমান শিল্প প্রতিষ্ঠান/প্রকল্পের জন্য নিম্নে প্রদত্ত তথ্যাদিসহ কাগজপত্র জমা প্রদান করিয়া পরিবেশগত ছাড়পত্র নবায়নের জন্য আবেদন করিতেছি:

১. শিল্প প্রতিষ্ঠান/প্রকল্পের নাম: ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রুভমেন্ট প্রজেক্ট
২. শিল্প প্রতিষ্ঠান/প্রকল্পের ঠিকানা: ওয়াসা ভবন, ২৮, কাজী নজরুল ইসলাম এভিনিউ (নিম্ন তলা) বাঙ্গলা বাজার, ঢাকা।
৩. (ক) শিল্প প্রতিষ্ঠানের ক্ষেত্রে উৎপাদিত পণ্যের নাম ও পরিমাণ (দৈনিক/মাসিক): .....
(খ) প্রস্তাবিত প্রকল্পের ক্ষেত্রে প্রকল্পের প্রধান কার্যক্রম: নতুন পানির লাইন স্থাপন ও রাইজার কানেকশন।
৪. পরিবেশগত ছাড়পত্র জারির স্মারক নম্বর: ২২.০২.০০০০.০১৮.৭২.৪৩.১৯.২৬৩ তারিখ: ২২/৬/২০১৯
৫. সর্বশেষ নবায়নের তারিখ: ২৪, ০৭, ২০২২ মেয়াদ উত্তীর্ণের তারিখ: ২২, ০৬, ২০২৩
৬. প্রকল্পের বিনিয়োগকৃত অর্থ: ৬২৮২,৩০,০০০০০.০০ টাকা
৭. ছাড়পত্র নবায়ন ফি বাবদ প্রদেয় অর্থ:
ট্রেজারী চালান নম্বর: ২২২৩-০০২১০৮৯৩৭ তারিখ: ০৪, ০৫, ২০২৩
ব্যাংকের নাম: সোনালী ব্যাংক লিমিটেড শাখা: বাঙ্গলাবাজার
৮. ছাড়পত্র নবায়ন ফি'র উপর মূসক বাবদ প্রদেয় অর্থ:
ট্রেজারী চালান নম্বর: ২২২৩-০০২১০৭৬২০৬ তারিখ: ০৪, ০৫, ২০২৩
ব্যাংকের নাম: সোনালী ব্যাংক লিমিটেড শাখা: বাঙ্গলাবাজার
৯. কারখানা বা প্রকল্পের কার্যক্রম:

কারখানা/প্রকল্পের বর্তমান কার্যক্রম	✓ চালু	○ বন্ধ	○ বন্ধ থাকিলে উহার তারিখ: ...../...../.....
কারখানার উৎপাদন প্রক্রিয়া বা প্রকল্পের কার্যক্রমের কোনো পরিবর্তন হইয়াছে কিনা?	○ হাঁ	✓ না	○ হাঁ হইলে তথ্য প্রদান করুন:

Md. Waz Uddin
Superintending Engineer &
Project Director, DWSNIP
Dhaka WASA

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
ঢাকা মহানগর কার্যালয়
পরিবেশ ভবন, ই/১৬, আগারগাঁও, ঢাকা ১২০৭
www.doe.gov.bd

পরিবেশগত ছাড়পত্র নবায়ন

ছাড়পত্র নং: ২৩-১১০৩০৪

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে পরিবেশগত ছাড়পত্র নবায়ন প্রদান করা হলো:

প্রতিষ্ঠান/প্রকল্পের নাম	: Dhaka water supply Network Improvement project
উদ্যোক্তার নাম	: Dhaka Water Supply And Sewerage Authority
সনাক্তকরণ নং	: ৭৯৫১৯
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম	: Water, power and gas distribution line laying/relaying/extension
প্রতিষ্ঠান/প্রকল্পের শ্রেণী	: Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা	: project director,Dhaka WASA, WASA Bhaban (8th floor), 98, Kazi Nazrul Islam Avenue, Kawran Bazar, Dhaka-1215
প্রদানের তারিখ	: ১৪ নভেম্বর ২০২৩
মেয়াদ উত্তীর্ণের তারিখ	: ১২ জুন ২০২৪

এ ছাড়পত্র সনদের সাথে পৃথকভাবে সংযুক্ত প্রদত্ত শর্তাবলী যথাযথভাবে প্রতিপালন করতে হবে, অন্যথায় ছাড়পত্র বাতিল/ক্ষতিপূরণ আদায়সহ যে কোন আইনানুগ ব্যবস্থা গ্রহণ করা হবে।

বিঃদ্রঃ এটি একটি সিস্টেম জেনারেটেড ছাড়পত্র এবং এতে কোনোরূপ স্বাক্ষরের প্রয়োজন নেই।

ছাড়পত্রটি যাচাই করতে ভিজিট করুন: https://ecc.doe.gov.bd/certificate_verification

সনাক্তকরণ নং: ৭৯৫১৯ Dhaka water supply Network Improvement project ছাড়পত্র নং: ২৩-১১০৩০৪

পরিবেশগত ছাড়পত্র নবায়ন এর জন্য প্রযোজ্য শর্তাবলী:

১. এ ছাড়পত্র শুধুমাত্র ঢাকা ওয়াটার সাপ্লাই নেটওয়ার্ক ইমপ্রোভমেন্ট প্রজেক্ট(ডিডব্লিউএসএনআইপি)-এর ক্ষেত্রে প্রযোজ্য হবে।

২. বর্ণিত প্রকল্পের অনুকূলে পরিবেশ অধিদপ্তরের বিগত ১২.০৬.২০১৯ তারিখ নং-২২.০২.০০০০.০১৮.৭২.৪৩.১৯.২৩৩ সংখ্যক স্মারকে প্রদত্ত পরিবেশগত ছাড়পত্রের সকল শর্ত অপরিবর্তীত থাকবে।

৩. প্রকল্পের কার্যক্রম দ্বারা কোন অবস্থায় রাস্তায় যানজট সৃষ্টি করা যাবেনা। এ বিষয়ে বিকল্প ব্যবস্থাপনা সার্বক্ষণিক কার্যকর রাখতে হবে।

৪. প্রকল্পের এলাইনমেন্টে যানজট নিয়ন্ত্রণের জন্য নিজস্ব জনবল দ্বারা সার্বক্ষণিক যানজট নিয়ন্ত্রণের জন্য কার্যকর উদ্যোগ গ্রহণ করতে হবে।

৫. কোন অবস্থায় প্রকল্পের কার্যক্রম দ্বারা কোন জলাজয়, ডোবা, নালা, বিল, খাল, পুকুর, বন্যা প্রবাহ এলাকা, ওয়াটার রিটেনশন এরিয়া ভরাট করা যাবেনা।

৬. প্রকল্পের কার্যক্রম বাস্তবায়নের সময় রাস্তা খোড়া-খোঁড়ি করার সময় তাৎক্ষণিকভাবে রাস্তার মাটি নিরাপদে অপসারণ করতে হবে এবং কোন মাটি/বালি উন্মুক্ত অবস্থায় রাখা যাবেনা যাতে রোদে ডাষ্ট উত্থিত হয়ে বায়ু দূষণ না হয় এবং বৃষ্টির পানিতে ষ্ট্রম ওয়াটারের সাথে মিশে রাস্তা সংলগ্ন ড্রেনেজ ব্লক সৃষ্টি হয়ে জলাবদ্ধা সৃষ্টি না করে।

৭. প্রকল্পের পাশের রাস্তায় কোন ধরনের নির্মাণ সামগ্রী রেখে ফুটপাত/রাস্তার প্রতিবন্ধকতা সৃষ্টি করা যাবেনা।

৮. প্রকল্পের কার্যক্রম দ্বারা পরিবেশ ও প্রতিবেশের ক্ষতিসাধন করা হলে Polluters Pay Principle অনুসারে ক্ষতিপূরণ ধার্য করে নির্ধারিত সময়ের মধ্যে ধার্যকৃত ক্ষতিপূরণ আদায় করা হবে।

৯. মহামান্য হাইকোর্ট বিভাগের রিট পিটিশন নম্বর ৯১৬/২০১৯ এর বিগত ২৯/০১/২০১৯ তারিখের আদেশ অনুযায়ী প্রকল্প নির্মাণকালে বায়ু/ডাষ্ট দূষণ নিয়ন্ত্রণকল্পে দৈনিক অন্ততঃ দুইবার পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১০. প্রকল্পের কার্যক্রমের মাধ্যমে কোন প্রকার বায়ু/শব্দ দূষণ সৃষ্টি করা যাবেনা। নির্মাণ কাজ চলাকালিন নির্মাণাধীন অবকাঠামো/বালু/মাটি যথাযথভাবে ঢেকে রাখতে হবে যাতে ধূলাবালি আশেপাশে ছড়িয়ে না পড়ে।

১১. প্রকল্পের কাজ শেষ হওয়ার সাথে সাথে তাৎক্ষণিকভাবে খোঁড়া-খোঁড়ি কৃত রাস্তা পূর্বের অবস্থায় ফিরিয়ে আনতে হবে।

১২. বায়ুদূষণ নিয়ন্ত্রণের জন্য নির্মাণ সামগ্রী ঢেকে রাখতে হবে এবং নির্মাণ সামগ্রী পরিবহনের সময়ও ঢেকে পরিবহণ করতে হবে।

১৩. নির্মাণাধীন অবকাঠামো/প্রকল্পের এলাইনমেন্ট এলাকায় নিয়মিত পানি ছিটিয়ে বায়ু দূষণ নিয়ন্ত্রণ করতে হবে।

১৪. প্রকল্পের নির্মাণ কার্যক্রম চলাকালে শব্দ নিয়ন্ত্রণ/নিয়মন মাত্রা শব্দ দূষণ (নিয়ন্ত্রণ) বিধিমালা, ২০০৬ এবং পরিবেশ সংরক্ষণ বিধিমালা, ২০২৩ ও বায়ু দূষণ (নিয়ন্ত্রণ) বিধিমালা, ২০২২-এ বর্ণিত মানমাত্রার মধ্যে রাখতে হবে।

১৫. সব ধরণের বর্জ্যের ক্ষেত্রে বিশেষতঃ কঠিন বর্জ্য ব্যবস্থাপনায়, উৎসে বর্জ্য পৃথকীকরণ করতে হবে এবং বর্জ্য হ্রাস, পুনঃব্যবহার ও পুনঃচক্রায়ন নীতিমালা তথা 3R(Reduce, Reuse, Recycle) Principles অনুসরণ করতে হবে। এছাড়া পৃথকীকৃত বর্জ্য আবৃত অবস্থায় উপযুক্ত সময় নিকটস্থ সিটি কর্পোরেশনের ট্রান্সফার ষ্টেশন/ডাম্পিং গ্রাউন্ডে স্থানান্তর/পরিবহনের বিষয়টি উদ্যোক্তা নিজস্ব উদ্যোগ/সিটি কর্পোরেশনের সহায়তায় নিশ্চিত করবেন।

১৬. নির্মাণকাজ চলাকালে শ্রমিকদের পেশাগত স্বাস্থ্য সুরক্ষা সামগ্রী (পিপিই যেমন ইয়ার প্লাগ, নোজ মাস্ক ইত্যাদি) সার্বক্ষণিকভাবে ব্যবহার করতে হবে।

১৭. পরিবেশগত ছাড়পত্র ও সর্বশেষ নবায়নের কপি প্রকল্প অফিসে সংরক্ষণ করতে হবে।

১৮. ছাড়পত্র নবায়নের মেয়াদ শেষ হবার অন্ততঃ ত্রিশ দিন পূর্বে প্রাসঙ্গিক কাগজপত্রসহ অন-লাইনে নবায়নের জন্য আবেদন করতে হবে।

১৯. উপর্যুক্ত শর্ত এবং অবস্থান বিষয়ক পরিবেশগত ছাড়পত্রের প্রদত্ত অন্যান্য শর্তাবলী প্রতিপালনে ব্যর্থ হলে ছাড়পত্র বাতিল বলে গণ্য হবে এবং বাংলাদেশ পরিবেশ সংরক্ষণ আইন, ১৯৯৫ (সংশোধিত-২০১০) এবং পরিবেশ সংরক্ষণ বিধিমালা, ২০২৩ অনুযায়ী আইনগত ব্যবস্থা গ্রহণ করা হবে

Annex 04: Environmental Safeguard Compliances in the Field
ICB 2.10

Checklist for DTW works

DMA No. / Package: ICB-2.1D (DMA 108B) Date: 15.11.2023

Location: Tipu Sultan DTW

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering Deep Tube well Work and H&S plan for the DTW works?	✓			
2.	Has the contractor completed risk assessment for the DTW works?	✓			
3.	Is the contractor informed Zonal Authorities and Councillor before starting work?	✓			
4.	Is the contractor informed Electrical Authorities before starting the work	✓			
5.	Is the contractor contacted traffic authority before starting the work?	✓			
6.	Is tool box meeting held before starting work?	✓			
7.	Does the operator have the minimum experience for the job?	✓			
8.	Have the workers provided appropriate PPEs?	✓			
9.	Is there any physical barrier or caution tape deployed for the excavation pit?	✓			
10.	Whether NGO has done the IEC activities?	✓			
11.	Are there sufficient display warning signs at the DTW work site?	✓			
12.	Is the first aid box with required materials kept at site?				Not sufficient
13.	Are the rescue procedures completed and reserved at the site?	✓			
14.	Are Display Board, Traffic diversion, Clean & Clear passage way provided?		✓		Not sufficient
15.	Are excavated materials placed sufficiently away from water courses?	✓			
16.	Are debris and waste materials transported to selected disposal places from temporary disposal site?		✓		
17.	Whether firm barricades are provided?		✓		
18.	In case of loose soil strata whether shoring is provided?			✓	
19.	Do generators operate with doors closed or provided with sound barrier around them?		✓		
20.	Do workers use ear plugs/hearing protections at noise generating locations?		✓		
21.	Are neighbouring residents notified in advance of any noisy activities expected at construction sites?	✓			

Contractor's representative:
MD. Kawsar (SE)
Name, Designation and Signature

DMS representative:
15.11.2023
Name, Designation and Signature

NCB 2.11A

Checklist for Excavation Work

DMA No. / Package: DMA-306, NCB 2-11A Date 5.10.2023

Location: Mohammadpur bus Stand

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering traffic management plan and H&S plan for the excavation works?	✓			
2.	Has the contractor completed risk assessment for the excavation works?	✓			
3.	Has the RFI completed for the excavation works?	✓			
4.	Is the excavation permit/pre-dig permit obtained before starting work?	✓			
5.	Is the contractor obtained road cutting permission from city corporation?	✓			
6.	Is the contractor contacted traffic authority for the excavation work?	✓			
7.	Is tool box meeting held before starting work?		✓		
8.	Does the operator and signalman have the minimum experience for the job?			✓	
9.	Have the workers provided appropriate PPEs?	✓			provided but not used by workers
10.	Is there any physical barrier or caution tape deployed for the excavation pit?	✓			
11.	Whether NGO has done the IEC activities?	✓			
12.	Are there sufficient display warning signs at the excavation site?		✓		Not adequate
13.	Is the first aid box with required materials kept at site?		✓		
14.	Are the rescue procedures completed and reserved at the site?		✓		
15.	Are Display Board, Traffic diversion, Clean & Clear passage way provided?	✓			
16.	Are excavated materials placed sufficiently away from water courses?	✓			
17.	Are debris and waste materials transported to selected disposal places from temporary disposal site?				Not adequately
	Trenches up to 2m:				
18.	Whether excavated material is dumped at least 1m away from trench wall?	✓			
19.	Whether the extra material is removed?	✓			
20.	In case of Ground water whether pumped water is drained properly?	✓			
	Trenches & pits depth of more than 2m:				
21.	Whether firm barricades are provided?	✓			
22.	In case of loose soil strata whether shoring is provided?			✓	

Contractor's representative:
Anjurul Islam (OPW) Supervisor
Name, Designation and Signature

DMS representative: 5.10.2023
Name, Designation and Signature
EI, DMS

Checklist for Traffic Management

Date: 05.10.2023

DMA No. / Package: DMA 306/2:11A

Location: Mohammadpur bus stand

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the Contractor completed the Method Statement considering traffic management plan?	✓			
2.	Is the Contractor contacted with DMP before starting the construction work?	✓			
3.	Is there traffic control supervisor present at construction site?		✓		
4.	Is toolbox meeting held before starting the work?		✓		
5.	Have every driver and equipment operators their valid driving license?			—	
6.	Are the traffic controllers and supervisors trained and accredited?			—	
7.	Are traffic signages available around the construction sites and nearby roads?		✓		
8.	Are re-routing signage sufficient to guide motorists?		✓		
9.	Are flagmen present to direct traffic during construction hour?		✓		
10.	Are the excavation sites along roads provided with barricades with reflectors?	✓			
11.	Are Display Board, Traffic diversion, clean & clear passage way provided?	✓			
12.	Are there sufficient display warning signs available for traffic movement?		✓		
13.	Are the excavation sites provided with sufficient lighting at night?			—	
14.	Is the first aid box with required materials kept at site?		✓		
15.	Are the rescue procedures completed and reserved at site?		✓		

Contractor's representative:

Anwarul Islam (DPW) Supervisor

Name, Designation and Signature

DMS representative:

5.10.2023

Name, Designation and Signature

EI, DMS

Checklist for Electrical Work

DMA No. / Package: DMA-306 NCB-2.11A Date: 5.10.2023

Location: Mohammedpur bus stand

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed risk assessment for the electrical works?	✓			
2.	Are all the electrical equipment operated by licensed electrician?	✓			
3.	Are all electrical components certified?	✓			
4.	Are all the electrical equipment checked before operation?	✓			
5.	Whether the workers are using proper gloves and goggles?		✓		
6.	Whether required earthing is provided for equipment?	✓			
7.	Whether proper wiring & connections boards with RCCB (30mA) fuse are being used?	✓			
8.	Is the electrical equipment are kept on dry place, barricaded to avoid accidental contact by stakeholder?	✓			
9.	Is the area barricaded and using flags where electrical work is conducting?		✓		
10.	Are emergency contact details available on-site in case of electrocutions or burns?		✓		
11.	Is toolbox meeting held before starting the work?	✓			
12.	Are there a medical first aid kits available on site for primary medical care?				Not sufficient
13.	Are the rescue procedures completed and reserved at the site?	✓			

Contractor's representative:

Ansurul Islam (OPU) Supervisor

Name, Designation and Signature

DMS representative:

5.10.2023

Name, Designation and Signature

EI, DMS

NCB 2.11B

Checklist for Fire Safety

DMA No. / Package: DMA-313, NCB-2.11B Date: 10.10.2023

Location: Tajmohol Road, Mohammad Pur

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering fire safety plan and H&S plan for the fire safety?	✓			
2.	Has the contractor completed risk assessment for the fire?	✓			
3.	Is toolbox meeting held before starting the work?	✓			
4.	Are there firefighting equipment on site?		✓		
5.	Are there fire extinguisher available at labour shed?	✓			
6.	Are all the firefighting equipment operated by trained & experienced operators?	✓			
7.	Are emergency contact details available on-site in case of fire burns?		✓		
8.	Are emergency contact details available at labour shed in case of fire burns?	✓			
9.	Are there a medical first aid kits available on site for primary medical care?	✓			
10	Are the rescue procedures completed and reserved at the site?		✓		

Contractor's representative:

Name, Designation and Signature

DMS representative:

Name, Designation and Signature

uration - 5-10 min

) water, sand

SE-RFL

MD. Rayhan

EI, DMS

Checklist for Emergency Response

DMA No. / Package: DMA.313, NCB-2.11B Date: 10.10.2023

Location: Taimahel Road, Mohammadpur

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the Contractor completed the Method Statement considering emergency response plan and H&S plan for the emergency response?	✓			
2.	Has the Contractors completed communications and lines of communication with the Authorities of the Bangladesh?	✓			
3.	Has the Contractors completed systems and procedures for provision of first aid, medical attention and medical evacuation?	✓			first was available
4.	Is the Contractor established an emergency response centre?		✓		
5.	Is the emergency response centre open for full time during the work?		✓		
6.	Is there arrangement for emergency response team meeting?	✓			
7.	Has the Contractor completed collection of all available facts?	✓			
8.	Did the Contractor arrange accident/incident investigation team?		✓		
9.	Do the contractors take accident/incidents records?	✓			
10.	Is the area barricaded with caution tape while any accident happens?	✓			
11.	Are emergency contact details available on-site?		✓		
12.	Are there a medical first aid kits available on site for primary medical care?	✓			
13.	Are the rescue procedures completed and reserved at the site?		✓		

Contractor's representative:

Name, Designation and Signature

SE: RFL

MD. Rayhan

DMS representative:

Name, Designation and Signature

ET. DMS

Checklist for Dust Control & Noise Control

DMA No. / Package: DMA-213, NCB-2 IIR Date: 10.10.2023

Location: Taj mahal Road, Mohammadpur

	Description	Observation			Remarks
	Dust Control	Yes	No	NA	
1.	Is the construction site watered to minimize generation of dust?	✓			
2.	Are roads within and around the construction sites sprayed with water on regular intervals?	✓			
3.	Is there a speed control for vehicles carrying soils and other spoils covered?	✓			
4.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?	✓			
5.	Are construction vehicles carrying soils and other spoiled covered?		✓		
6.	Are generators provided with air pollution control devices?		✓		
7.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid permits?	✓			
	Noise Control	Yes	No	NA	
1.	Is the work only taking place between 7 am to 7 pm, week days?	✓			
2.	Do generators operate with doors closed or provided with sound barrier around them?	✓			
3.	Do workers use ear plugs/hearing protections at noise generating locations?	✓			
4.	Is idle equipment turned off or throttled down?	✓			
5.	Are neighbouring residents notified in advance of any noisy activities expected at construction sites?	✓			

Contractor's representative:

MD Rayhan SE, RFL

Name, Designation and Signature

DMS representative:

10.10.2023

Name, Designation and Signature

EI, DMS

NCB 2.11C Lot-2

* Gumboot Not provided
* helmet Not provided by Contractor

Checklist for Excavation Work

DMA No. / Package: DMA 411, NCB-2.11C, L-2 Date: 9.10.2023

Location: South Manipur, Mkpur-2

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering traffic management plan and H&S plan for the excavation works?	✓			
2.	Has the contractor completed risk assessment for the excavation works?	✓			
3.	Has the RFI completed for the excavation works?	✓			
4.	Is the excavation permit/pre-dig permit obtained before starting work?	✓			
5.	Is the contractor obtained road cutting permission from city corporation?	✓			
6.	Is the contractor contacted traffic authority for the excavation work?	✓			
7.	Is tool box meeting held before starting work?		✓		
8.	Does the operator and signalman have the minimum experience for the job?			✓	
9.	Have the workers provided appropriate PPEs?		✓		
10.	Is there any physical barrier or caution tape deployed for the excavation pit?		✓		
11.	Whether NGO has done the IEC activities?	✓			
12.	Are there sufficient display warning signs at the excavation site?		✓		
13.	Is the first aid box with required materials kept at site?		✓		
14.	Are the rescue procedures completed and reserved at the site?		✓		
15.	Are Display Board, Traffic diversion, Clean & Clear passage way provided?		✓		
16.	Are excavated materials placed sufficiently away from water courses?		✓		
17.	Are debris and waste materials transported to selected disposal places from temporary disposal site?		✓		
	Trenches up to 2m:				
18.	Whether excavated material is dumped at least 1m away from trench wall?		✓		
19.	Whether the extra material is removed?	✓			
20.	In case of Ground water whether pumped water is drained properly?			✓	
	Trenches & pits depth of more than 2m:				
21.	Whether firm barricades are provided?			✓	
22.	In case of loose soil strata whether shoring is provided?			✓	

Contractor's representative:
MD. HUSER JANNAT ROKU (SE)
Name, Designation and Signature

DMS representative:
Name, Designation and Signature
EI, DMS

Checklist for Occupational Health & Safety and Community Health & Safety

DMA No. / Package: DMA-411, NCB-2.11C, L-2 Date: 19.09.2023

Location: South Manipur, Micro-2

	Description	Observation			Remarks
1.	Supervision and Management On-Site	Yes	No	NA	
	a. Is an EHS supervisor available?	✓			
	b. Is a copy of the SEMP available at construction site?	✓			
	c. Are daily toolbox meetings conducted on site?	✓			
2.	Facilities	Yes	No	NA	
	a. Are there a medical first aid kits available on site?		✓		
	b. Are emergency contact details available on-site?		✓		
	c. Are there PPEs available; Helmet, HI-VIS Vest, Gumboots, Eye Wear, Dust Mask, Safety Gloves, Earplugs?	—	—	—	Not sufficient
	d. Are the PPEs in good condition?	✓			
	e. Are there firefighting equipment on site?	✓			
	f. Are there separate mobile sanitary facilities for male and female workers?	✓			
	g. Are sanitary facilities cleaned and disinfected regularly?	✓			
	h. Is drinking water supply available for workers?	✓			
3.	Occupational Health and Safety	Yes	No	NA	
	a. Are the PPEs being used by workers	✓			
	b. Is breaktime for workers provided?	✓			
	c. Is construction work site barricaded with caution tape?	✓			
4.	Community Health and Safety	Yes	No	NA	
	a. Are safety signages posted around the sites?	✓			
	b. Are temporary and safe walkways for pedestrians available near work sites?		✓		
	c. Are consultation meeting/focus group discussion/tea stall meeting arranged regularly on site?	✓			
	d. Are existing users notified in advance about temporary disruption of water supply?	✓			
	e. Are Leaflets distributed on site to inform the local residents about the project work?	✓			
	f. Is complain book available on work site to receive complain from local people?	✓			

S.	Recording System	Yes	No	NA	
	a) Do the contractors have recording system for SEMP implementation?	✓			
	b) Are the daily monitoring sheets accomplished by the contractor EHS supervisor (or equivalent) properly complied?	✓			
	c) Are laboratory results of environmental sampling conducted since the commencement of construction activities properly complied?	✓			
	d) Are these records readily available at the site and to the inspection team?	✓			
	e) Are utility accidents recorded and proper actions are taken immediately?	✓			
	f) Are public complaints recorded at construction site and addressed quickly and properly?	✓			
	g) Are there any registered book available at construction site/stockyard for visitors/inspection teams?	✓			
	h) Is there any Complain box available for anonymous complain at construction site/stockyard?	✓			

Contractor's representative:
MD. ROKU (SE)
Name, Designation and Signature

DMS representative:
19.09.2023
Name, Designation and Signature
EI. DMS

Checklist for Traffic Management

DMA No. / Package: DMA 411, NCB 211 C; L2 Date: 9.10.2023

Location: South Manipur, Mirpur-2

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the Contractor completed the Method Statement considering traffic management plan?	✓			
2.	Is the Contractor contacted with DMP before starting the construction work?	✓			
3.	Is there traffic control supervisor present at construction site?		✓		
4.	Is toolbox meeting held before starting the work?		✓		
5.	Have every driver and equipment operators their valid driving license?			✓	
6.	Are the traffic controllers and supervisors trained and accredited?		.	✓	
7.	Are traffic signages available around the construction sites and nearby roads?		✓		
8.	Are re-routing signage sufficient to guide motorists?		✓		
9.	Are flagmen present to direct traffic during construction hour?		✓		
10.	Are the excavation sites along roads provided with barricades with reflectors?		✓		
11.	Are Display Board, Traffic diversion, clean & clear passage way provided?		✓		
12.	Are there sufficient display warning signs available for traffic movement?		✓		
13.	Are the excavation sites provided with sufficient lighting at night?		.	✓	
14.	Is the first aid box with required materials kept at site?		✓		
15.	Are the rescue procedures completed and reserved at site?		✓		

Contractor's representative:
MD. NURER JANNAT ROKY (SE)
Name, Designation and Signature

DMS representative:
EI, DMS
Name, Designation and Signature

NCB 2.11D Lot-2

Checklist for Fire Safety

DMA No. / Package: DMA 1001, Namapara, Manikdi Date: 10.10.2023

Location: Namapara, Manikdi, 2.11D-L-2

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering fire safety plan and H&S plan for the fire safety?	✓			
2.	Has the contractor completed risk assessment for the fire?	✓			
3.	Is toolbox meeting held before starting the work?	✓			
4.	Are there firefighting equipment on site?	✓			
5.	Are there fire extinguisher available at labour shed?	✓		✓	
6.	Are all the firefighting equipment operated by trained & experienced operators?	✓			
7.	Are emergency contact details available on-site in case of fire burns?		✓		
8.	Are emergency contact details available at labour shed in case of fire burns?	✓			
9.	Are there a medical first aid kits available on site for primary medical care?	✓			
10	Are the rescue procedures completed and reserved at the site?	✓			

Contractor's representative:

Ahsan Habib
Engineer (PDL)

Name, Designation and Signature

DMS representative:

EE, DMS

Name, Designation and Signature

Checklist for Emergency Response

DMA No. / Package: DMA 1001, Namapara, Manikdi Date: 10.10.2023

Location: Namapara, Manikdi, 2.11 D, L-2

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the Contractor completed the Method Statement considering emergency response plan and H&S plan for the emergency response?	✓			
2.	Has the Contractors completed communications and lines of communication with the Authorities of the Bangladesh?	✓			
3.	Has the Contractors completed systems and procedures for provision of first aid, medical attention and medical evacuation?	✓			
4.	Is the Contractor established an emergency response centre?	✓			
5.	Is the emergency response centre open for full time during the work?			✓	
6.	Is there arrangement for emergency response team meeting?	✓			
7.	Has the Contractor completed collection of all available facts?	✓			
8.	Did the Contractor arrange accident/incident investigation team?	✓			
9.	Do the contractors take accident/incidents records?	✓			
10.	Is the area barricaded with caution tape while any accident happens?	✓			
11.	Are emergency contact details available on-site?	✓			
12.	Are there a medical first aid kits available on site for primary medical care?	✓			
13.	Are the rescue procedures completed and reserved at the site?	✓			

Contractor's representative:
Ansan Habib
Engineer (PDL)
Name, Designation and Signature

DMS representative:
EI, DMS
Name, Designation and Signature

Annex 05: Pictures showing Safeguards Compliances at works level

ICB 2.10

Road Barrier, cones, caution tape and all other safety measures are taken while working

Safety vest, Hand gloves, Helmet and Shoes are used in working site

Water spray are being used to control dust and keep the site clean

Providing sign boards for proper safety in worksite

Mild steel plates are being used as a cover of open pit

Safety Meeting before starting work at construction site

Monthly fire extinguisher inspection at construction site store

Covered sand to control dust pollution

Pictures showing Safeguards Compliances at works level (Annex 5 Cont.)
NCB 2.11A

Road Barrier, cones, caution tape and all other safety measures are taken while working

Water spray are being used to control dust and keep the site clean

Providing sign boards for proper safety in worksite

Portable Toilet for workers with water supply system

Clean and proper housekeeping for prevention of dengue at store

Pictures showing Safeguards Compliances at works level (Annex 5 Cont.)

NCB 2.11D Lot-2

Road Barrier, cones, caution tape and all other safety measures are taken while working

Safety vest, Hand gloves ,Helmet and Shoes are used in working site

Water spray are being used to control dust and keep the site clean

Providing sign boards for proper safety in worksite

Portable Toilet for workers with water supply system

Clean and proper housekeeping for prevention of dengue at store

Annex 06: SAMPLE GRIEVANCE REGISTRATION FORM

The Project (DWSNIP) welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback. Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing "CONFIDENTIAL" above your name. Thank you.

Date	Place of registration				
Contact Information/Personal Details					
Name		Gender	* Male * Female	Age	
Home Address					
Place					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below: If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					
FOR OFFICIAL USE ONLY					
Registered by: (Name of Official registering grievance)					
Mode of communication: Note/Letter /E-mail /Verbal/Telephonic					
Reviewed by: (Names/Positions of Official(s) reviewing grievance)					
Action Taken:					
Whether Action Taken Disclosed: Yes ( ) No ( )					
Means of Disclosure:					

GRIVENCE REDRESS REGISTAR GRIVENCES RECORD AND ACTION TAKEN

Sr. No.	Date	Name and Contact No. of Complainer	Type of Complain	Place	Status of Redress	Remarks

Annex 07: Status on prevention of COVID 19 during reporting period

Precautionary measures taken by the Contractors (ICB 2.08, 2.09 & 2.10)

- Disinfection of site offices, Camps, Toilets, Stores, Rest room etc.
- Display all the relevant posters, leaflets, signboards on COVID 19
- Holding site meetings with social distance other health precautions
- Using of sanitizers as far as possible
- Checking body temperature of all workers daily.
- Awareness programs have been conducted
- Conducted Monitoring at the worksite according to monitoring templates

Monitoring and Reporting Template

Health and Safety Issues with COVID-19 Infection

A. Environmental Health and Safety Checklist

	Checklist		Number/ Quantity
1	Number of workers & employees available at site	260	
2	Health checkup/screening completed for all workers/employee/visitors	Every day	
3	COVID-19 posters/signboards prepared and posted at the worksite and camp	8-10 each site	
4	Washbasin, sanitizer dispenser	3 Washbasins	
5	Stock of soap, sanitizer, disinfectant, PPEs available at site	-	Stocks Available
6	Number of cleaning staff employed	3	
7	Number of covered bins with COVID sign at the site	6	

B. Daily Monitoring: COVID -19 protocols on top of usual EHS checklist (worksite and campsite)

Sl no.	EHS Practices Checklist*	Observations		Corrective Action	Time frame to comply
		Yes	No		
1	Medical professional is available at site		No	Workers are quickly taken to hospital after First Aid if	
2	EHS officer is available at site	Yes			
3	Entrance protocol: 6 ft distance maintained as stipulated in the COVID -19 response guidance?		No	Staff and Labours should maintain 6 ft distance between each other.	Immediate and to be continued
4	Disinfectant spray used at site entry to disinfect underneath the boots of entering persons	Partially Complied		Disinfectant spray should be used underneath the boots upon entry.	Immediate and to be continued
5	Workers & employees are using mask, gloves and shoes	Yes			
6	Workers & employees are washing	Yes			
7	Used PPEs are disposed in covered	Yes			
8	Social distancing: workers & employees maintaining social distancing all the time	Partially Complied		There should be no physical contacts like shaking hands and sitting together etc.	Immediate and to be continued
9	Vehicle protocol: vehicle disinfection protocol followed		No	All operating vehicles should be disinfected regularly.	Immediate and to be continued

10	Tools/machineries: wiped to disinfect before and after sharing/working		No	All tools and machineries should be wiped with disinfectant.	Immediate and to be continued
11	Disinfecting work area: worksite/ common surfaces, toilets etc. are disinfected before worksite opened in the morning, before lunch and yesterday after closing for the day	Partially Complied		Should be fully complied with.	Immediate and to be continued
12	Trash bins are covered and used for disposal of PPEs	Yes			

Site Assessment for Resumption of Construction

(Guidance for Site Specific Plan)

	Site Assessment Checklist (preconditions for opening the	Yes/No	Remarks
1	Is there any hospital or health care center in close proximity that is equipped to test COVID-19 infection? a. If yes, please prepare a list of the hospitals with contact number b. If no, please make an arrangement to provide	Yes	We have prepared a list of hospitals for testing COVID-19 infection.
2	Did you locate the hospital or health care center equipped to treat COVID-19 patient? Please prepare contact details.	Yes	We have contact details of hospitals equipped to treat COVID-19.
3	Did you prepare a list of the workers/employee to be engaged at the sites? If yes, please prepare work schedule by staggering work hours (physical distance must be >1 m. to avoid crowding) If there is an issue, please contact with your EA.	Yes	We have list of workers engaged at sites.
4	Did you prepare any health checkup or screening checklist for maintaining daily health record of workers/visitors?	Yes	We use health checklist to record health conditions of workers.
5	Did you conduct worksite risk exposure using guidelines provided in Annex C? a. Construction sites with low to medium risk exposures, must follow the EHS guidelines for preventing infection. b. For a site with high-risk exposure, avoid	Yes	Complied.

6	Did you recruit any health and safety professional for managing occupational health and safety at the site? a. If yes, please engage immediately and share the EHS Manual for day-to-day implementation and reporting b. If no, dedicate an existing worker and	Yes	Health and safety team is always present at sites.
7	Is there adequate PPE, disinfectant, sanitizer, soap, covered trash bin at all worksites.	Yes	Complied
8	Did you setup washbasin, sanitizer dispenser, covered waste bin adequately at each site? If not, please setup immediately and update your EA.	Yes	Complied
9	Did you prepare post COVID-19 posters/signboards in Bangla? If yes, please place them at the entrance, worksite and camp using the samples provided in Annex D? If not, please prepare immediately.	Yes	We use posters/banners/leaflets for COVID-19 awareness.
10	Did you prepare a plan for raising awareness of your workers/employees on various measures to avoid COVID-19 infection? Please prepare weekly plan and disseminate at the worksite.	Yes	We have a plan for raising awareness on COVID-19 prevention.
11	Did you prepare the site-specific health and safety plan for your worksites? Please prepare the plan providing details of the issues discussed from Sections A to E and Annex (B – E) of this manual and submit to EA for approval.	Yes	We have site specific EHS plan.
12	Is the worksite falls under government declared YELLOW or RED zone? If yes, please consult with EA for reopening the site.	N/A	N/A
13	Did you review the monitoring and reporting template? If necessary, please update the template as per site condition and get it approved by EA.	Yes	It has been updated on a regular basis.

Annex 08: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024)

Table 13 A: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for ICB 2.10

Environmental Safeguard Implementation		January-24	February-24	March-24	April -24	May-24	June-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	DMA 101,102,103,104,105,106,112,118 (during construction)	DMA 109A,109B,111,117 (during construction)				
2	Noise (dBA for day and night time)	DMA 101,102,103,104,105,106,112,118 (during construction)	DMA 109A,109B,111,117 (during construction)				
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	DMA 102,103,104,106,110,118,119 (during construction)	DMA 109A,109B,111,112,117 (during construction)				
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl, Fe, Mn and Total Coliform)	DMA 102,103,104,106,110,118,119 (during construction)	DMA 109A,109B,111,112,117 (during construction)				

Construction Period Reporting and Training							
5	Monthly Environmental Report	Records of environmental activities will be prepared by the Environmental Engineer	Records of environmental activities will be Prepared by the Environmental Engineer	Records of environmental activities will be Prepared by the Environmental Engineer	Records of environmental activities will be Prepared by the Environmental Engineer		
6	Quarterly Environmental Inspections and Report		Report will be generated by the Environmental Engineer according to the site inspection & requirement of the DMSC.				
7	Semi Annual Report		Environmental Engineer will prepare the Report				
8	Contractor Training	Site manager /Engr. O&M related training every month and include in monthly report	Site manager /Engr. O&M related training every month and include in monthly report	Site manager /Engr. O&M related training every month and include in monthly report	Site manager /Engr. O&M related training every month and include in monthly report		
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to be given to the locals, at Worksites that the work will be implemented with minimal level of disturbance.	In case of night works, prior information to be given to the locals, at Worksites that the work will be implemented with minimal level of disturbance.	In case of night works, prior information to be given to the locals, at Worksites that the work will be implemented with minimal level of disturbance.	In case of night works, prior information to be given to the locals, at Worksites that the work will be implemented with minimal level of disturbance.		
10	Dust control (PM 2.5, PM 10)	SE (SO) / (PE) misting water sprays to reduce airborne dusting from demolition work and during dry weather	SE (SO) / (PE) misting water sprays to reduce airborne dusting from demolition work and during dry weather	SE (SO) / (PE) misting water sprays to reduce airborne dusting from demolition work and during dry weather	SE (SO) / (PE) misting water sprays to reduce airborne dusting from demolition work and during dry weather		

11	Occupational Health and Safety	CPP develops site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. SE (SO) arranges H& S training for the labor on regular basis. Safety Officer provides potable drinking water and first aid-box. CCSEB_RPL JV provides medical insurance coverage for workers	CPP develops site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. SE (SO) arranges H& S training for the labor on regular basis. Safety Officer provides supplies of potable drinking water and first aid-box. CCSEB-RPL JV provides medical insurance coverage for workers	CPP develops site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. SE (SO) arranges H& S training for the labor on regular basis. Safety Officer provides supplies of potable drinking water and first aid-box. CCSEB-RPL JV provides medical insurance coverage for workers	CPP develops site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. SE (SO) arranges H& S training for the labor on regular basis. Safety Officer provides supplies of potable drinking water and first aid-box. CCSEB-RPL JV provides medical insurance coverage for workers		

12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	Environmental Engineer provides as per consultant requirements	Environmental Engineer provides as per consultant requirements	Environmental Engineer provides as per consultant requirements	Environmental Engineer provides as per consultant requirements		
13	Disposal of construction debris and other waste materials	Concerned 2nd man of the DMA & Safety Officer arranges all the debris and other wastes to be removed from the site and transported to the disposal site	Concerned 2nd man of the DMA Safety Officer arranges all the debris and other wastes to be removed from the site and transported to the disposal site	Concerned 2nd man of the DMA & Safety Officer arranges all the debris and other wastes to be removed from the site and transported to the disposal site	Concerned 2nd man of the DMA & Safety Officer arranges all the debris and other wastes to be removed from the site and transported to the disposal site		

14	Servicing and operating equipment	Engr. O&M ensures that all site personnel have a basic level of EHS awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	Engr. O&M ensures that all site personnel have a basic level of EHS awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	Engr. O&M ensures that all site personnel have a basic level of EHS awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	Engr. O&M ensures that all site personnel have a basic level of EHS awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task		

15	COVID 19 Prevention Measures	SE(SO) / Environmental Engr. Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	SE(SO) / Environmental Engr. Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	SE(SO) / Environmental Engr. Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	SE(SO) / Environmental Engr. Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers		
16	Traffic Management	2nd man of the DMA/ SE (SO) implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	2nd man of the DMA/ SE (SO) implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	2nd man of the DMA/ SE (SO) implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	2nd man of the DMA/ SE (SO) implements the Traffic Management Plan to ensure the safety of all the road users along the work zone		
17	On-Site Supervision and Management	SM of the DMA ensures On-site supervision and management properly	SM of the DMA ensures On-site supervision and management properly	SM of the DMA ensures On-site supervision and management properly	SM of the DMA ensures On-site supervision and management properly		

Table 13 B: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB 2.11A

Environmental Safeguard Implementation		January-24	February-24	March-24	April-24	May-24	June-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	DMA301			DMA303		
2	Noise (dBA for day and night time)	DMA301			DMA303		
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	-			-		
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl,	DMA301			DMA303		

Construction Period Reporting and Training							
5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			TCEL will provide according to consultant's requirement from DMS			TCEL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	TCEL organize QHSE related training every month and include it in monthly report	TCEL organize QHSE related training every month and include it in monthly report	TCEL organize QHSE related training every month and include it in monthly report	TCEL organize QHSE related training every month and include it in monthly report	TCEL organize QHSE related training every month and include it in monthly report	TCEL organize QHSE related training every month and include it in monthly report

Construction Period Mitigation Measures							
9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	TCEL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers	TCEL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site specific EMP. TCEL arranges H& S training for the labor on regular basis. TCEL provides supplies of potable drinking water and first aid-box. TCEL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	TCEL provides as per consultant requirements	TCEL provides as per consultant requirements	TCEL provides as per consultant requirements	TCEL provides as per consultant requirements	TCEL provides as per consultant requirements	TCEL provides as per consultant requirements

13	Disposal of construction debris and other waste materials	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site	TCEL arranges all the debris and other wastes be removed from the site and transported to the disposal site
14	Servicing and operating equipment	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	TCEL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task

15	COVID 19 Prevention Measures	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	TCEL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers
16	Traffic Management	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	TCEL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	TCEL ensures On-site supervision and management properly	TCEL ensures On-site supervision and management properly	TCEL ensures On-site supervision and management properly	TCEL ensures On-site supervision and management properly	TCEL ensures On-site supervision and management properly	TCEL ensures On-site supervision and management properly

Table 13 C: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB-2.11B

Environmental Safeguard Implementation		Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	DMA 305	-	DMA 305	DMA 305	-	-
2	Noise (dBA for day and night time)	DMA 307	-	DMA 307	DMA 307	-	-
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	DMA 312	-	DMA 312	DMA 312	-	-
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl,	DMA 313	-	DMA 313	DMA 313	-	-
Construction Period Reporting and Training							

5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			RFL will provide according to consultant's requirement from DMS			RFL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements

13	Disposal of construction debris and other waste materials	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site
14	Servicing and operating equipment	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task

15	COVID 19 Prevention Measures	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers
16	Traffic Management	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly

Table 13 D: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB-2.11C, Lot-1

	Environmental Safeguard Implementation	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	DMA 406 DMA 411 DMA 412	-	DMA 406 DMA 411 DMA 412	DMA 406 DMA 411 DMA 412	-	-
2	Noise (dBA for day and night time)	DMA 406 DMA 411 DMA 412	-	DMA 406 DMA 411 DMA 412	DMA 406 DMA 411 DMA 412	-	-
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	DMA 406 DMA 411 DMA 412	-	DMA 406 DMA 411 DMA 412	DMA 406 DMA 411 DMA 412	-	-
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl,	DMA 406 DMA 411 DMA 412	-	DMA 406 DMA 411 DMA 412	DMA 406 DMA 411 DMA 412	-	-
Construction Period Reporting and Training							

5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			RFL will provide according to consultant's requirement from DMS			RFL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements
13	Disposal of construction debris and other waste materials	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site

14	Servicing and operating equipment	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task
15	COVID 19 Prevention Measures	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers

16	Traffic Management	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly

Table 13 E: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB-2.11C, Lot-2

Environmental Safeguard Implementation		Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	-	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414		
2	Noise (dBA for day and night time)	-	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414		
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	-	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414		
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl,	-	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414	DMA 409 DMA 413 DMA 414		
Construction Period Reporting and Training							

5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			RFL will provide according to consultant's requirement from DMS			RFL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements

13	Disposal of construction debris and other waste materials	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site
14	Servicing and operating equipment	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task

15	COVID 19 Prevention Measures	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers
16	Traffic Management	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly

Table 13 F: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB-2.11D, Lot-1

Environmental Safeguard Implementation		Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	-	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011		
2	Noise (dBA for day and night time)	-	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011		
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	-	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011		
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl,	-	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011	DMA 1005 DMA 1010 DMA 1011		
Construction Period Reporting and Training							

5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			RFL will provide according to consultant's requirement from DMS			RFL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report	RFL organize QHSE related training every month and include it in monthly report
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	RFL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	RFL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements	RFL provides as per consultant requirements
13	Disposal of construction debris and other waste materials	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site	RFL arranges all the debris and other wastes be removed from the site and transported to the disposal site

14	Servicing and operating equipment	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	RFL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task
15	COVID 19 Prevention Measures	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	RFL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers

16	Traffic Management	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	RFL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly	RFL ensures On-site supervision and management properly

Table 13 F: Environmental Management Implementation Work Schedule (EMWS): Six months working plan (January-June, 2024) for NCB-2.11D, Lot-2

Environmental Safeguard Implementation		Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
1	Air Quality (CO, S02, N02, SPM, PM2.5, PM10)	-	DMA 1001 DMA 1009		DMA 1001 DMA 1009		
2	Noise (dBA for day and night time)	-	DMA 1001 DMA 1009		DMA 1001 DMA 1009		
3	Surface Water Quality (pH, DO, BOD5, COD, As, Cl, Fe, Mn)	-	DMA 1001 DMA 1009		DMA 1001 DMA 1009		
4	Groundwater Quality ((pH, DO, BOD5, COD, As, Cl, Fe, Mn and	-	DMA 1001 DMA 1009		DMA 1001 DMA 1009		
Construction Period Reporting and Training							

5	Monthly Environmental Report	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary	Records of environmental activities are included within Monthly progress report and the Cumulative Project Summary
6	Quarterly Environmental Inspections and Report			PDL-AEDL will provide according to consultant's requirement from DMS			PDL-AEDL will provide according to consultant's requirement from DMS
7	Semi Annual Report						As per consultant requirement
8	Contractor Training	PDL-AEDL organize QHSE related training every month and include it in monthly report	PDL-AEDL organize QHSE related training every month and include it in monthly report	PDL-AEDL organize QHSE related training every month and include it in monthly report	PDL-AEDL organize QHSE related training every month and include it in monthly report	PDL-AEDL organize QHSE related training every month and include it in monthly report	PDL-AEDL organize QHSE related training every month and include it in monthly report
Construction Period Mitigation Measures							

9	Noise attenuation measures	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used	In case of night works, prior information to locals, at worksites with minimal level of disturbance possible to locality but noise reducers are not used
10	Dust control (PM 2.5, PM 10)	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather	PDL-AEDL provides misting water sprays to reduce airborne dusting from demolition work and during dry weather

11	Occupational Health and Safety	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers	PDL-AEDL develops and implement site specific occupational health and safety (OH&S) Plan, and include in the Site-specific EMP. RFL arranges H& S training for the labor on regular basis. RFL provides supplies of potable drinking water and first aid-box. RFL provides medical insurance coverage for workers
12	The Environmental Management Implementation Work Schedule (EMWS) plus other work plans as specified in EMP	PDL-AEDL provides as per consultant requirements	PDL-AEDL provides as per consultant requirements	PDL-AEDL provides as per consultant requirements	PDL-AEDL provides as per consultant requirements	PDL-AEDL provides as per consultant requirements	PDL-AEDL provides as per consultant requirements
13	Disposal of construction debris and other waste materials	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site	PDL-AEDL arranges all the debris and other wastes be removed from the site and transported to the disposal site

14	Servicing and operating equipment	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task	PDL-AEDL ensures that all site personnel have a basic level of environmental awareness training and Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task
15	COVID 19 Prevention Measures	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers	PDL-AEDL Provides Covid-19 banner in each construction site, distributes leaflets to workers, hand wash facilities, distribute mask, sanitizer and organize training for workers

16	Traffic Management	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone	PDL-AEDL implements the Traffic Management Plan to ensure the safety of all the road users along the work zone
17	On-Site Supervision and Management	PDL-AEDL ensures On-site supervision and management properly	PDL-AEDL ensures On-site supervision and management properly	PDL-AEDL ensures On-site supervision and management properly	PDL-AEDL ensures On-site supervision and management properly	PDL-AEDL ensures On-site supervision and management properly	PDL-AEDL ensures On-site supervision and management properly

Annex 09: DMA wise Environmental parameter Testing Reports

Air Quality Monitoring: Laboratory Test report, ICB 2.10

DMA 110, 117, 119

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 117)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. ICB 2.10
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: December 18, 2023
Sampling Time: 10.00 AM - 2.00 PM
Reporting Date: December 24, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-1117 Sampling Location: Near Gandaria Police station: 53.K.B. Road ,Mill Barrack GPS Location: 23°41'59"N 90°25'15"E	246	124	53	31	26	1.2
DMA-117 Sampling Location: Bank of Gendaria DIT Pond, Dhaka GPS Location: 23°42'01"N 90°25'42"E	210	104	41	24	18	0.8
DMA-117 Sampling Location: Beside Al Amin Mosque, Gendaria, Dhaka GPS Location: 23°41'46"N 90°25'27"E	223	111	44	25	21	1.0
Reference Standards						
Ambient Air Quality Standards, Schedule-1, Air Pollution (Control) Regulations, Bangladesh Gazette, Additional, July 26, 2022	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Ambient Air Quality Standards, Schedule-1, Air Pollution (Control) Regulations, Bangladesh Gazette, Additional, July 26, 2022
Note 2: WHO Ambient Air Quality Guidelines, 2021

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 110)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. ICB 2.10
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: December 14, 2023
Sampling Time: 10.00 AM - 1.00 PM
Reporting Date: December 24, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-110 Sampling Location: Maniknagar Bus Stop, Ram Krishna Mission Road, Dhaka GPS Location: 23° 43' 19.96"N 90° 25' 43.31"E	293	152	81	67	52	2.5
DMA-110 Sampling Location: Maniknagar Wasa Road GPS Location: 23° 43' 31.10"N 90° 26' 01.50"E	145	93	54	35	23	0.9
DMA-110 Sampling Location: Maniknagar Balur Math Panir Pump at East Maniknagar, Mugda GPS Location: 23° 43' 31.00"N 90° 26' 14.50"E	138	81	42	27	16	0.7

Reference Standards						
Ambient Air Quality Standards, Schedule-1, Air Pollution (Control) Regulations, Bangladesh Gazette, Additional, July 26, 2022	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Ambient Air Quality Standards, Schedule-1, Air Pollution (Control) Regulations, Bangladesh Gazette, Additional, July 26, 2022
Note 2: WHO Ambient Air Quality Guidelines, 2021

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 119)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. ICB 2.10
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: December 14, 2023
Sampling Time: 2.00 PM - 6.00 PM
Reporting Date: December 24, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-119 Sampling Location: Near Postogola Fire Service Station at MC Road, Postogola, Shampur, Dhaka GPS Location: 23° 41' 27.56"N 90° 25' 50.01"E	235	145	78	59	62	2.3
DMA-119 Sampling Location: Near Janata Bank Ltd at 215, Karim Ullarbag, Postagola, Smashanghat Road, Dhaka GPS Location: 23° 41' 33.83"N 90° 25' 39.55"E	212	142	69	55	52	2.5
DMA-119 Sampling Location: Near Jurain Labur Kachabazr at 74/D IT Plot, Balurmath, Postogola, Jurain, Dhaka GPS Location: 23° 41' 39.08"N 90° 25' 58.11"E	215	147	73	48	43	2.1

Reference Standards						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

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Air Quality Monitoring: Laboratory Test report, NCB 2.11B, DMA 307

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 307)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11B
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: September 28, 2023
Sampling Time: 09.00 AM - 11.00 AM
Reporting Date: October 3, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-307 **Sampling Location:** In front of Dhaka Art College **GPS Location:** 23° 44' 54.10"N 90° 21' 48.00"E	150	99	43	25	24	2.2
DMA-307 **Sampling Location:** In front of Bangladesh Eye Hospital **GPS Location:** 23° 45' 06.70"N 90° 22' 02.60"E	157	103	57	29	19	1.7
Reference Standards						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

Air Quality Monitoring: Laboratory Test report, NCB 2.11C Lot-1, DMA 406, 411, 412

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 406)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11C (Lot-1)
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: August 27, 2023
Sampling Time: 09.00 AM - 10.00 AM
Reporting Date: September 03, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-406 Sampling Location: Monipur High School & College, Ibrahimpur, Shewarapara, Mirpur, Dhaka GPS Location: 23° 48' 1.62"N 90° 21' 57.29"E	141	105	55	32	18	1.2
DMA-406 Sampling Location: Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka GPS Location: 23° 47' 54.16"N 90° 22' 20.17"E	149	98	44	27	20	2.3
Reference Standards:						
DoE, Bangladesh Standard for Ambient Air, 2022	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-1: ambient Air Quality Standards, Air Pollution (Control) Rules 2022, Bangladesh Gazette Additional, July 26, 2022, SRO-255-Act/2022
Note 2: WHO Ambient Air Quality Guidelines, 2021

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Cert NO: 05.007.20

Laboratory Analysis Report (DMA 411)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11C (Lot-1)
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: August 27, 2023
Sampling Time: 10.20 AM - 11.20 AM
Reporting Date: September 03, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-411 Sampling Location: Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60 foot road), Mirpur-1, Dhaka GPS Location: 23° 47' 28.00"N 90° 21' 57.40"E	153	101	51	30	25	1.5
DMA-411 Sampling Location: Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur GPS Location: 23° 47' 30.30"N 90° 22' 14.00"E	155	108	46	24	23	2
Reference Standards:						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 412)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11C (Lot-1)
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: August 27, 2023
Sampling Time: 11.40 AM - 12.40 PM
Reporting Date: September 03, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-412 Sampling Location: Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur GPS Location: 23° 47' 18.05"N 90° 22' 20.6"E	145	97	54	28	17	1.1
DMA-412 Sampling Location: Ali Miar Tek Market, Pirerbag, West Shewarapara, Mirpur GPS Location: 23° 47' 23.19"N 90° 22' 15.79"E	138	106	49	33	21	2.4

Reference Standards						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

Air Quality Monitoring: Laboratory Test report, NCB 2.11C Lot-2, DMA 409

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 409)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11C (Lot-2)
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: September 28, 2023
Sampling Time: 11.30 AM - 1.30 PM
Reporting Date: October 03, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-409 **Sampling Location:** In front of Hazrat Shah Ali Mohila College **GPS Location:** 23° 47' 48.80"N 90° 20' 59.80"E	136	96	52	31	26	1
DMA-409 **Sampling Location:** In front of Sony Square Star Cineplex **GPS Location:** 23° 48' 01.40"N 90° 21' 21.40"E	146	100	48	26	22	2.1

Reference Standards						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

Air Quality Monitoring: Laboratory Test report, NCB 2.11D Lot-1, DMA 1010

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Laboratory Analysis Report (DMA 1010)

Project Name: Dhaka Water Supply Network Improvement Project (DWSNIP)
Package No. NCB 2.11D (Lot-1)
Description of sample: Ambient Air Quality
Sample Collector: GECL Team
Sampling Date: September 28, 2023
Sampling Time: 2.00 PM - 4.30 PM
Reporting Date: October 3, 2023

Laboratory Test Result

Sample Description	Concentration Present					
	SPM ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	CO (mg/m^3)
TWA Sampling Duration	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs	8 hrs
DMA-1010 **Sampling Location:** In front of Desh Polytechnic College **GPS Location:** 23° 49' 15.40"N 90° 22' 06.20"E	169	107	53	23	18	1.3
DMA-1010 **Sampling Location:** In front of City Club, Pallobi 23° 49' 22.40"N 90° 21' 55.60"E	152	102	45	34	20	2.5

Reference Standards						
DoE, Bangladesh Standard for Ambient Air, 2021	400 $\mu g/m^3$ (Commercial and mixed)	150 $\mu g/m^3$ (24 hrs)	65 $\mu g/m^3$ (24 hrs)	250 $\mu g/m^3$ (1 hr)	80 $\mu g/m^3$ (24 hrs)	5 mg/m^3 (8 hrs)
		50 $\mu g/m^3$ (Annual)	35 $\mu g/m^3$ (Annual)	80 $\mu g/m^3$ (24 hrs)	40 $\mu g/m^3$ (Annual)	20 mg/m^3 (1 hr)
WHO Ambient Air Quality Guideline, 2021	120 $\mu g/m^3$ (24 hrs)	45 $\mu g/m^3$ (24hrs)	15 $\mu g/m^3$ (24 hrs)	500 $\mu g/m^3$ (10 mins)	25 $\mu g/m^3$ (24 hrs)	7 mg/m^3 (24 hrs)
		15 $\mu g/m^3$ (Annual)	5 $\mu g/m^3$ (Annual)	40 $\mu g/m^3$ (24 hrs)	10 $\mu g/m^3$ (Annual)	

Note 1: Schedule-2 Air Quality Standards, Environmental Conservation Rules 1997 (dated 28 Aug 1997) (amended by the Notification SRO 220-Law/2005 (dated 19 July 2005)).
Note 2: WHO Ambient Air Quality Guidelines, 2021

Noise Monitoring: Laboratory Test report, ICB 2.10, DMA 117

GLOBAL ENVIRONMENT CONSULTANTS LTD.

ANALYSIS REPORT ON AMBIENT NOISE LEVEL

Client Name	Dhaka Water Supply Network Improvement Project (DWSNIP), Package No. ICB 2.10		
Report ID	GECL/DWSNIP/NOISE/2023/12/24/01	Date of Sampling	December18, 2023
Sampling Time	Day and Night (December 18, 2023		
Sampling Team	Global Environment Consultants Ltd. (GECL Monitoring Team).		
Analysis Date	December 24, 2023	Report Issuing Date	December 24, 2023

Description of Analysis

Sampling Location	Time Weighted Average Noise Level (LAeq) dB	
	Day Time (06.00 AM – 21.00 PM)	Night Time (09.00 PM – 06.00 AM)
DMA-1117 Sampling Location: Near Gandaria Police station; 53,K.B. Road ,Mill Barrack GPS Location: 23°41'59"N 90°25'15"E	73	61
DMA-117 Sampling Location: Bank of Gendaria DIT Pond, Dhaka GPS Location: 23°42'01"N 90°25'42"E	68	57
DMA-117 Sampling Location: Beside Al Amin Mosque, Gendaria, Dhaka GPS Location: 23°41'46"N 90°25'27"E	71	59

Note 1: Bangladesh Gadget (Additional), September 7, 2006, Schedule-1, Rule-52 (A)
Note 2: "Day" and "Night" of Bangladesh Noise Standards indicate 6 AM to 9 PM, and 9 PM to 6 AM respectively.

Noise Monitoring: Laboratory Test report, DMA 307, 409, 1010

GLOBAL ENVIRONMENT CONSULTANTS LTD.

ANALYSIS REPORT ON AMBIENT NOISE LEVEL

Client Name	Dhaka Water Supply Network Improvement Project (DWSNIP).		
Report ID	GECL/DWSNIP/NOISE/2023/10/03/01	Date of Sampling	September 28, 2023
Sampling Time	Day and Night (September 28, 2023)		
Sampling Team	Global Environment Consultants Ltd. (GECL Monitoring Team).		
Analysis Date	October 3, 2023	Report Issuing Date	October 3, 2023

Description of Analysis

Sampling Location	Time Weighted Average Noise Level (LAeq) dB	
	Day Time (06.00 AM - 21.00 PM)	Night Time (09.00 PM - 06.00 AM)
DMA-307 Sampling Location: In front of Dhaka Art College GPS Location: 23° 44' 54.10"N 90° 21' 48.00"E	69	55
DMA-307 Sampling Location: In front of Bangladesh Eye Hospital GPS Location: 23° 45' 06.70"N 90° 22' 02.60"E	77	61
DMA-409 Sampling Location: In front of Hazrat Shah Ali Mohila College GPS Location: 23° 47' 48.80"N 90° 20' 59.80"E	72	57
DMA-409 Sampling Location: In front of Sony Square Star Cineplex GPS Location: 23° 48' 01.40"N 90° 21' 21.40"E	73	57
DMA-1010 Sampling Location: In front of Desh Polytechnic College GPS Location: 23° 49' 15.40"N 90° 22' 06.20"E	66	56
DMA-1010 Sampling Location: In front of City Club, Pallobi 23° 49' 22.40"N 90° 21' 55.60"E	70	58

Note 1: Bangladesh Gadget (Additional), September 7, 2006, Schedule-1, Rule-52 (A)
Note 2: "Day" and "Night" of Bangladesh Noise Standards indicate 6 AM to 9 PM, and 9 PM to 6 AM respectively.

Noise Monitoring: Laboratory Test report, NCB- 2.11C, Lot-1; DMA 406, 411, 412

GLOBAL ENVIRONMENT CONSULTANTS LTD.

Cert NO.: 05.007.20

ANALYSIS REPORT ON AMBIENT NOISE LEVEL

Client Name	Dhaka Water Supply Network Improvement Project (DWSNIP).		
Report ID	GECL/DWSNIP/NOISE/2023/10/02/NL	Date of Sampling	September 27, 2023
Sampling Time	Day and Night (September 27, 2023)		
Sampling Team	Global Environment Consultants Ltd. (GECL Monitoring Team).		
Analysis Date	October 2, 2023	Report Issuing Date	October 2, 2023

Description of Analysis

Sampling Location	Time Weighted Average Noise Level (LAeq) dB	
	Day Time (06.00 AM – 21.00 PM)	Night Time (09.00 PM – 06.00 AM)
DMA-406 Sampling Location: Monipur High School & College, Ibrahimpur, Shewarapara, Mirpur, Dhaka GPS Location: 23° 48' 1.62"N, 90° 21' 57.29"E	65	54
DMA-406 Sampling Location: Exim Bank Hospital, Begum Rokeya Avenue Sarani, Dhaka GPS Location: 23° 47' 54.16"N, 90° 22' 20.17"E	72	58
DMA-411 Sampling Location: Medi Home Hospital Uttar Pirerbag, Kamal Soroni (60 foot road), Mirpur-1, Dhaka GPS Location: 23° 47' 28.00"N, 90° 21' 57.40"E	64	54
DMA-411 Sampling Location: Anonda Bazar Road, Anonda Bazar, Shewarapara, Mirpur GPS Location: 23° 47' 30.30"N, 90° 22' 14.00"E	64	51
DMA-412 Sampling Location: Baitush Sakur Jame Mosque Road, Shewarapara, Mirpur GPS Location: 23° 47' 18.05"N, 90° 22' 20.6"E	61	49
DMA-412 Sampling Location: Ali Miar Tek Market, Pirerbag, West Shewarapara, Mirpur GPS Location: 23° 47' 23.19"N, 90° 22' 15.79"E	64	50

Note 1: Bangladesh Gadget (Additional), September 7, 2006, Schedule-1, Rule-52 (A)
Note 2: "Day" and "Night" of Bangladesh Noise Standards indicate 6 AM to 9 PM, and 9 PM to 6 AM respectively.

Ground Water Quality Monitoring: Laboratory Test report, ICB 2.10

Drinking/Ground Water Quality- DMA 109A, 109B, 111, 112, 117

Dhaka Water Supply and Sewerage Authority

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Memo No:46.113.519/520.00.00.001.2023.235 MCD Date 29-11-2023

Contract Manager
ICB-02.10-MODC-Zone-1 (19 DMAs)
Dhaka Water Supply Network Improvement Project (DWSNIP)
Dhaka WASA.

Subject: Testing Report of Collected Water Samples (03 nos) from DMA-109A (Baseline Monitoring) of the Contract Package no-ICB.02.10 of DWSNIP , Dhaka WASA
Ref: CCSEB-RPL.JV/RPL/ICB.02.10/PM/1443/2023, Date:21-09-2023

Date of Sample Received: 23-11-2023
Date of Testing: 23-11-2023 - 28-11-2023

Water Quality Analysis Report

SN	Parameters	Units	Drinking Water Standards		DTW, Dayagonj-1, DMA-109A	Network, 14/22/A, Ovoy Das lane	DTW, Gopibag, DMA-109A	Analysis Methods
			Bangladesh ECR 2023	WHO-2011				
1	pH	--	6.5-8.5	6.5-8.5	6.96	7.06	6.95	Electrometric
2	Turbidity	NTU	5	5	0.40	1.82	12.4	Nephelometric Method
3	Total Suspended Solids (TSS)	mg/L	10	--	01	01	02	Gravimetric
4	Dissolved Oxygen	mg/L	-	--	2.50	6.29	4.93	Electrometric
5	Chloride	mg/L	250	250	26	18	28	Argentometric
6	Iron	mg/L	0.3-1.0	0.3	1.06	0.18	1.66	Phenanthroline Method
7	Manganese	mg/L	0.4	0.4	0.339	0.118	0.499	FAN Method
8	Arsenic	mg/L	0.05	0.01	<0.01	<0.01	<0.01	Aerial Id.
9	BOD_5	mg/L	--	--	1.08	0.53	0.74	5 day BOD test
10	COD	mg/L	--	--	07	14	07	Closed Reflux, colorimetric
11	Total Coliforms	CFU/100 mL	0	0	0	0	0	Membrane Filtration

NB: Results are applicable for the above mentioned sample.

29-11-2023 10:04 AM	29-11-2023 11:54 AM	29-11-2023 10:09 AM	29-11-2023 12:24 PM	29-11-2023 02:36 PM
Md. Abdur Rahman	Md. Ruhul Amin	Hasna Hena Rahman	Tahmina Begum	Dr. Md. Alamgir Hossain
Lab. Assistant	Assistant Chemist	Assistant Microbiologist	Chemist	Deputy Chief Microbiologist

NB: 1. Samples supplied to the laboratory by client.
2. This report is valid only for particular sample tested and can not be used for publicity.
3. Reports are not allowed to be used or reproduced for any commercial purpose.

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Memo No:46.113.519/520.00.00.001.2023.255 MCD Date 07-12-2023
Contract Manager
ICB-02.10-MODD-Zone-1 (19 DMAs)
Dhaka Water Supply Network Improvement Project (DWSNIP)
Dhaka WASA.

Subject: Testing Report of Collected Water Samples (03 nos) from DMA-109B (Baseline Monitoring) of the Contract Package no-ICB.02.10 of DWSNIP , Dhaka WASA.
Ref: CCSEB-RPL.JV/RPL/ICB.02.10/PM/1519/2023, Date:04-11-2023

Date of Sample Received: 29-11-2023
Date of Testing: 29-11-2023 - 06-12-2023

Water Quality Analysis Report

SN	Parameters	Units	Drinking Water Standards		DTW, Saidabad Bus Terminal, DMA-109B	DTW, Doyagonj-3 , DMA-109B	Network, Uttar Gopibag Jame Mosjid, DMA-109B	Analysis Methods
			Bangladesh ECR 2023	WHO-2011				
1	pH	--	6.5-8.5	6.5-8.5	6.95	6.87	6.84	Electrometric
2	Turbidity	NTU	5	5	1.10	0.25	0.90	Nephelometric Method
3	Total Suspended Solids (TSS)	mg/L	10	--	06	05	02	Gravimetric
4	Dissolved Oxygen	mg/L	-	--	4.70	3.71	4.30	Electrometric
5	Chloride	mg/L	250	250	40	34	33	Argentometric
6	Iron	mg/L	0.3-1.0	0.3	0.111	0.015	0.137	AAS
7	Manganese	mg/L	0.4	0.4	0.119	0.087	0.129	AAS
8	Arsenic	mg/L	0.05	0.01	<0.01	<0.01	<0.01	As-test kit
9	BOD_5	mg/L	--	--	0.56	0.59	5.2	5 day BOD test
10	COD	mg/L	--	--	<1	<1	06	Closed Reflux, colorimetric
11	Total Coliforms	CFU/100 mL	0	0	0	0	0	Membrane Filtration

NB: Results are applicable for the above mentioned sample.

06-12-2023 12:09 PM	07-12-2023 03:46 PM	06-12-2023 12:28 PM	07-12-2023 03:38 PM	07-12-2023 04:01 PM
Md. Abdur Rahman	Md. Ruhul Amin	Hasna Hena Rahman	Tahmina Begum	Dr. Md. Alamgir Hossain
Lab. Assistant	Assistant Chemist	Assistant Microbiologist	Chemist	Deputy Chief Microbiologist

NB: 1. Samples supplied to the laboratory by client.
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Memo No:46.113.519/520.00.00.001.2023.217 MCD Date 20-11-2023
Contract Manager
ICB-02.10-MODG-Zone-1 (19 DMAs)
Dhaka Water Supply Network Improvement Project (DWSNIP)
Dhaka WASA.

Subject: Testing Report of Collected Water Samples (04 nos) from DMA-111 (Baseline Monitoring) of the Contract Package no-ICB.02.10 of DWSNIP , Dhaka WASA
Ref: CCSEB-RPL.JV/RPL/ICB.02.10/PM/1443/2023, Date:21-09-2023

Date of Sample Received: 14-11-2023
Date of Testing: 14-11-2023 - 19-11-2023

Water Quality Analysis Report

SN	Parameters	Units	Drinking Water Standards		DTW, East Dhalpur DMA-111	DTW, Jatrabari-3, DMA-111	Network, Dhalpur Narikal Bagan, DMA-111	Network, Child Heaven Tutorial School, DMA-111	Analysis Methods
			Bangladesh ECR 2023	WHO-2011					
1	pH	--	6.5-8.5	6.5-8.5	7.05	6.86	6.82	6.89	Electrometric
2	Turbidity	NTU	5	5	0.47	0.50	3.62	5.31	Nephelometric Method
3	Total Suspended Solids (TSS)	mg/L	10	--	01	01	06	07	Gravimetric
4	Dissolved Oxygen	mg/L	-	--	3.48	4.80	5.12	7.51	Electrometric
5	Chloride	mg/L	250	250	9	40	32	8	Argentometric
6	Iron	mg/L	0.3-1.0	0.3	0.222	0.143	0.374	0.913	AAS
7	Manganese	mg/L	0.4	0.4	0.063	0.088	0.128	0.054	AAS
8	Arsenic	mg/L	0.05	0.01	<0.01	<0.01	<0.01	<0.01	As-test kit
9	BOD_5	mg/L	--	--	1.0	1.04	2.5	14.5	5 day BOD test
10	COD	mg/L	--	--	2.0	2.0	18.0	19.0	Closed Reflux, colorimetric
11	Total Coliforms	CFU/100 mL	0	0	0	0	0	49	Membrane Filtration

NB: Results are applicable for the above mentioned sample.

20-11-2023 11:22 AM	20-11-2023 03:19 PM	20-11-2023 01:17 PM	20-11-2023 03:41 PM	20-11-2023 03:58 PM
Md. Abdur Rahman	Md. Ruhul Amin	Hasna Hena Rahman	Tahmina Begum	Dr. Md. Alamgir Hossain
Lab. Assistant	Assistant Chemist	Assistant Microbiologist	Chemist	Deputy Chief Microbiologist

NB: 1. Samples supplied to the laboratory by client.
2. This report is valid only for particular sample tested and can not be used for publicity.
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Dhaka Water Supply and Sewerage Authority

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Memo No:46.113.519/520.00.00.001.2023.253 MCD Date 07-12-2023

Contract Manager
ICB-02.10-MODS-Zone-1 (19 DMAs)
Dhaka Water Supply Network Improvement Project (DWSNIP)
Dhaka WASA

Subject: Testing Report of Collected Water Samples (03 nos) from DMA-117 (Baseline Monitoring) of the Contract Package no-ICB.02.10 of DWSNIP , Dhaka WASA
Ref: CCSEB-RPL.JV/RPL/ICB.02.10/PM/1443/2023, Date:21-09-2023

Date of Sample Received: 29-11-2023
Date of Testing: 29-11-2023 - 06-12-2023

Water Quality Analysis Report

SN	Parameters	Units	Drinking Water Standards		DTW, Mill Barrack, DMA-117	DTW, IG gate Staff Quarter , DMA-117	Network, Bangladesh Bank Adarsha High School	Analysis Methods
			Bangladesh ECR 2023	WHO-2011				
1	pH	--	6.5-8.5	6.5-8.5	6.84	6.91	6.95	Electrometric
2	Turbidity	NTU	5	5	2.25	0.38	2.24	Nephelometric Method
3	Total Suspended Solids (TSS)	mg/L	10	--	07	01	01	Gravimetric
4	Dissolved Oxygen	mg/L	-	--	4.32	2.75	5.26	Electrometric
5	Chloride	mg/L	250	250	16	28	31	Argentometric
6	Iron	mg/L	0.3-1.0	0.3	0.188	0.022	0.132	AAS
7	Manganese	mg/L	0.4	0.4	0.305	0.123	0.224	AAS
8	Arsenic	mg/L	0.05	0.01	<0.01	<0.01	<0.01	Arsenic kit
9	BOD_5	mg/L	--	--	0.62	0.71	4.3	5 day BOD test
10	COD	mg/L	--	--	<1	<1	11	Closed Reflux, colorimetric
11	Total Coliforms	CFU/100 mL	0	0	0	0	0	Membrane Filtration

NB: Results are applicable for the above mentioned sample.

06-12-2023 12:11 PM	07-12-2023 03:41 PM	06-12-2023 12:27 PM	07-12-2023 03:43 PM	07-12-2023 04:04 PM
Md. Abdur Rahman	Md. Ruhul Amin	Hasna Hena Rahman	Tahmina Begum	Dr. Md. Alamgir Hossain
Lab. Assistant	Assistant Chemist	Assistant Microbiologist	Chemist	Deputy Chief Microbiologist

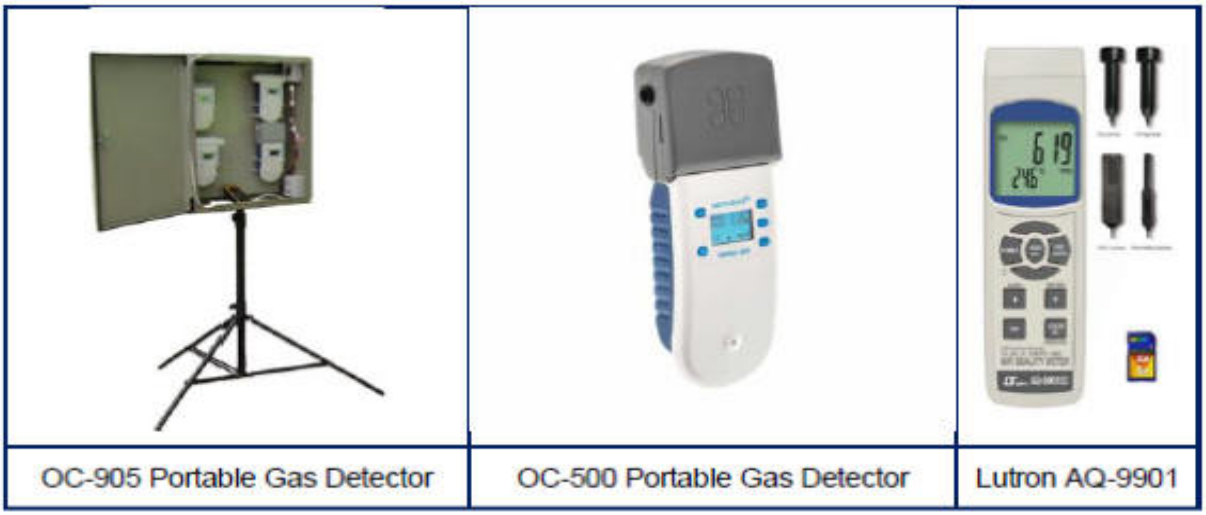
NB: 1. Samples supplied to the laboratory by client.
2. This report is valid only for particular sample tested and can not be used for publicity.
3. Reports are not allowed to be used or reproduced for any commercial purpose.

Annex 9A: Methodology of Air quality monitoring including sample calculation

2 METHODOLOGY

2.1 Air Quality

The ambient air quality monitoring was carried out at two (02) locations at the project corridor on 04 July 2022. The parameters were SO_X, NO_X, PM_{10}, $PM_{2.5}$ and CO. AEROQUAL series 500 portable air quality monitors were used to measure particulate matters (PM_{10} and $PM_{2.5}$) and gaseous pollutants (SO_2 and NOx) (Figure 2.1). Lutron AQ-9901 meter was used to monitor carbon monoxide (CO). The locations of sample collection are showed in the map (Figure 2.2). The weather was sunny during the monitoring period. Proper Personal Protective Equipment (PPE) including vests, face musk, hand gloves and helmets were used during the monitoring period.



OC-905 Portable Gas Detector	OC-500 Portable Gas Detector	Lutron AQ-9901

Figure 2.1: Equipment used for Air Quality Sampling

Conversion of Hourly to 24-hour Averages - Agencies, including the GoB's DoE, use the 24-hour collection period as the standard for establishing ambient air quality levels. Many agencies (e.g. New York State Dept. of Environmental Conservation, California Office of Environmental Health Hazards Assessment, USEPA, Ontario Ministry of Environment) face the same problems and have had to adapt by applying a conversion process using Pasquill's (1961) air mass dispersion tables defining six air mass stability classes (Table 2.1) and a set of meteorological conditions (Table 2.2). Using the simple power law principal Schroeder and Jugloff (2012) described the steps for converting one-hour readings to 24-hour values the stability classes (Table 2.1) are related to average wind speed, daytime solar radiation and night-time cloud cover and a second table (Table 2.2), refining these relationships, was also developed by Pasquill.

Table 2.1: Pasquill-Gifford Air Dispersion Stability Classes and Associated Dispersion Exponents

Stability Class	p	Definition
A	0.5	Very unstable
B	0.5	Unstable
C	0.333	Slightly unstable
D	0.2	Neutral
E	0.167	Slightly stable
F	0.167	Stable

Table 2.2: Meteorological Conditions Used to Define the Stability Classes

Surface wind Speed Cloud		Day time solar radiation		Night time Cover	
m/s	Strong	moderate	slight	>50%	<50%
< 2	A	A – B	B	E	F
2 – 3	A – B	B	C	E	F
3 – 5	B	B – C	C	D	E
5 – 6	C	C – D	D	D	D
> 6	C	D	D	D	D

Note: Grey highlight indicates condition selected for Bangladesh

Therefore, taking the simple average of these three values from Table 1, the Project stability class was calculated as 0.39 (see below).

$$P= \frac{0.5 +0.5+0.2}{3} = 0.4$$

This suggests a somewhat unstable air mass, resulting in considerable dilution of a one-hour sample when spread out over a 24-hour period. In order to provide 24- hour averages for the seven parameters the following power-law equation, as defined in Schroeder and Jugloff was applied

$$C_{24h}=C_{1h}(t_{short}/t_{long})^{0.4}$$

Where C 1h is the measured 1-hour concentration and C 24 h is the estimated average using the exponent 0.370, and "t" is time. Therefore:

$$C_{24h}= C_{2h}\ (2/24)^{0.4}$$
$$= C_{2h\,x}\,(0.0833)^{0.4}$$
$$= C_{2h\,x}0.370$$

So, for example for the two-hour measurement of $PM_{2.5}$ of 188.37 µg/m3 the 24- hour average would be:

$$\text{24hr Avg. } PM_{10} = 188.37x\ 0.370$$
$$= 69.7\ \mu g/m^3$$

This generalized approach was applied to all data, and the 24-hour averages generated, in order to be able to compare Project results to GoB standards.

Annex 9B: Photograph of air quality, noise and water quality monitoring during the reporting period (July-December, 2023)

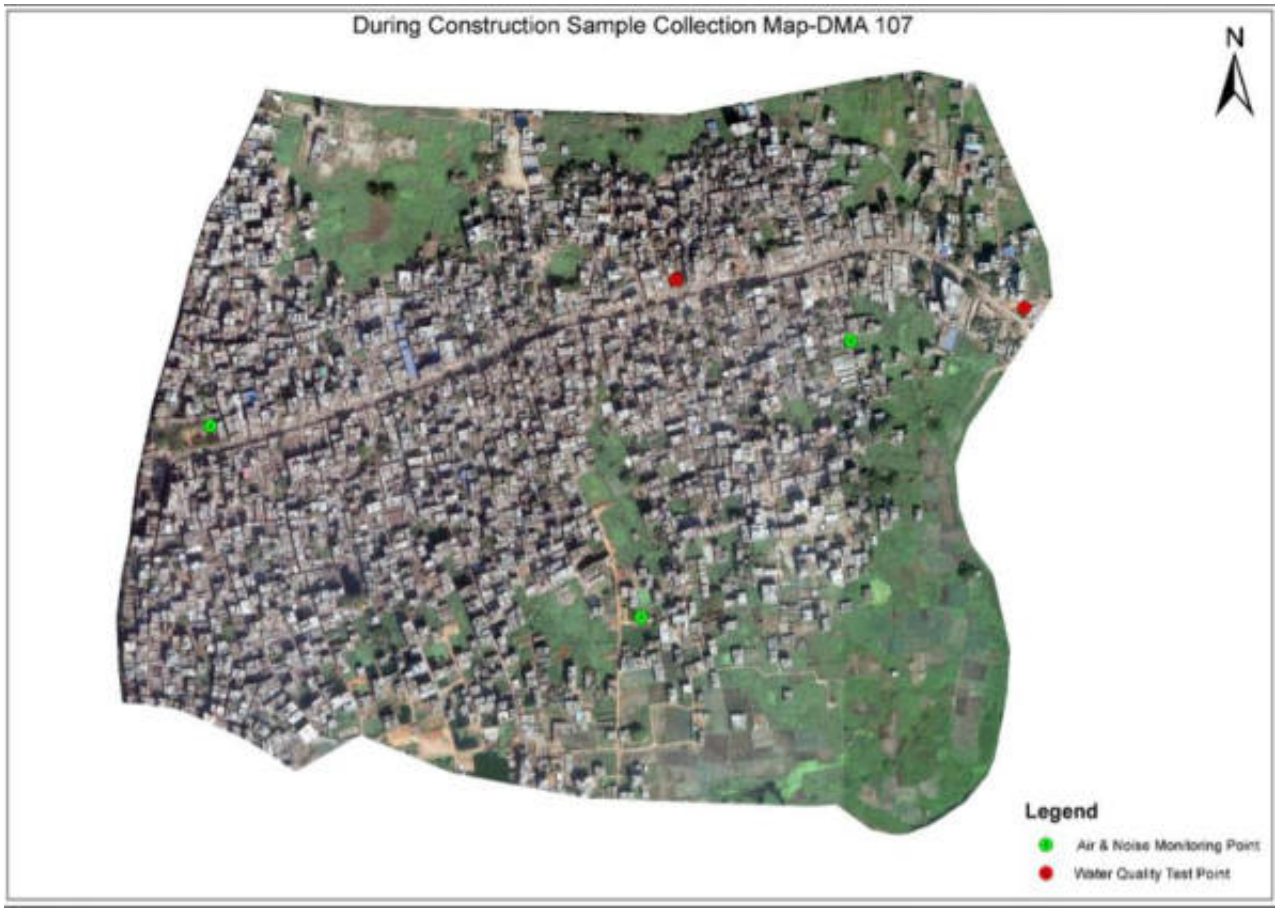

Air Quality Monitoring


Noise Level Monitoring

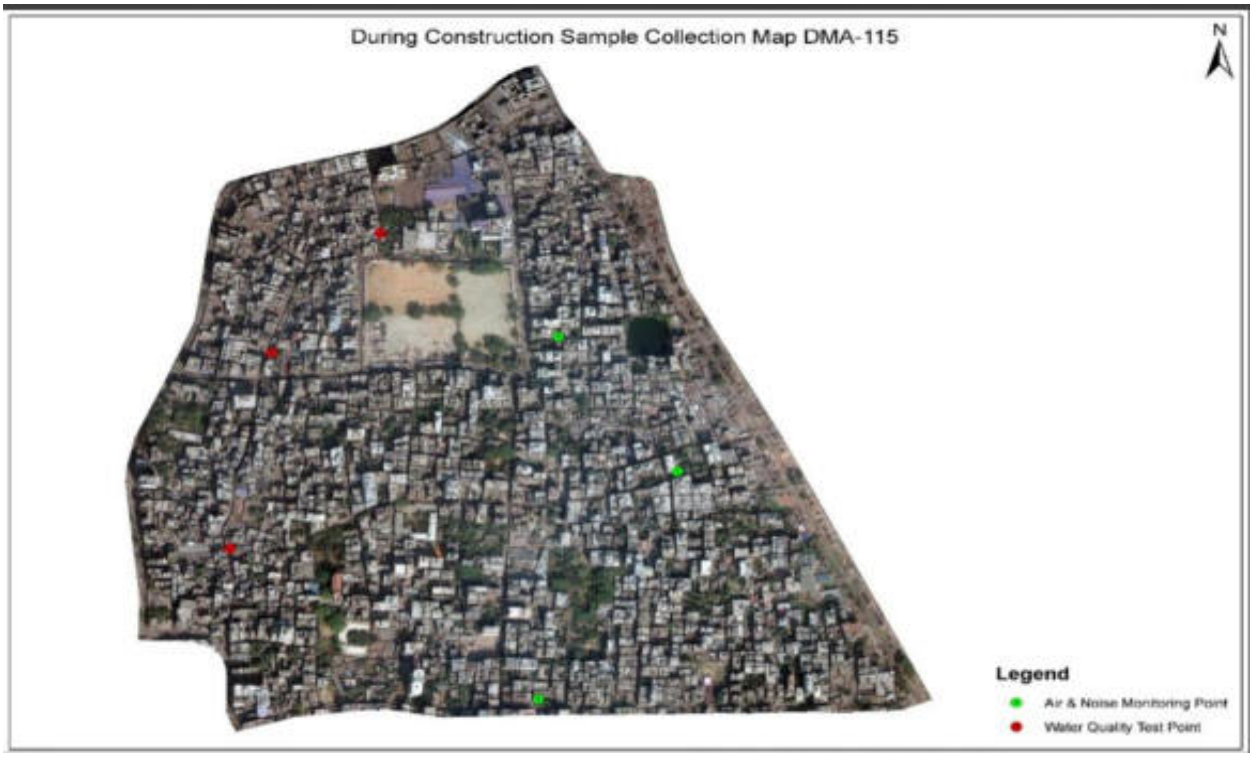

Water Sample Collection

Annex 9C: Location Map of air quality, noise and water quality monitoring during the reporting period (July-December, 2023)

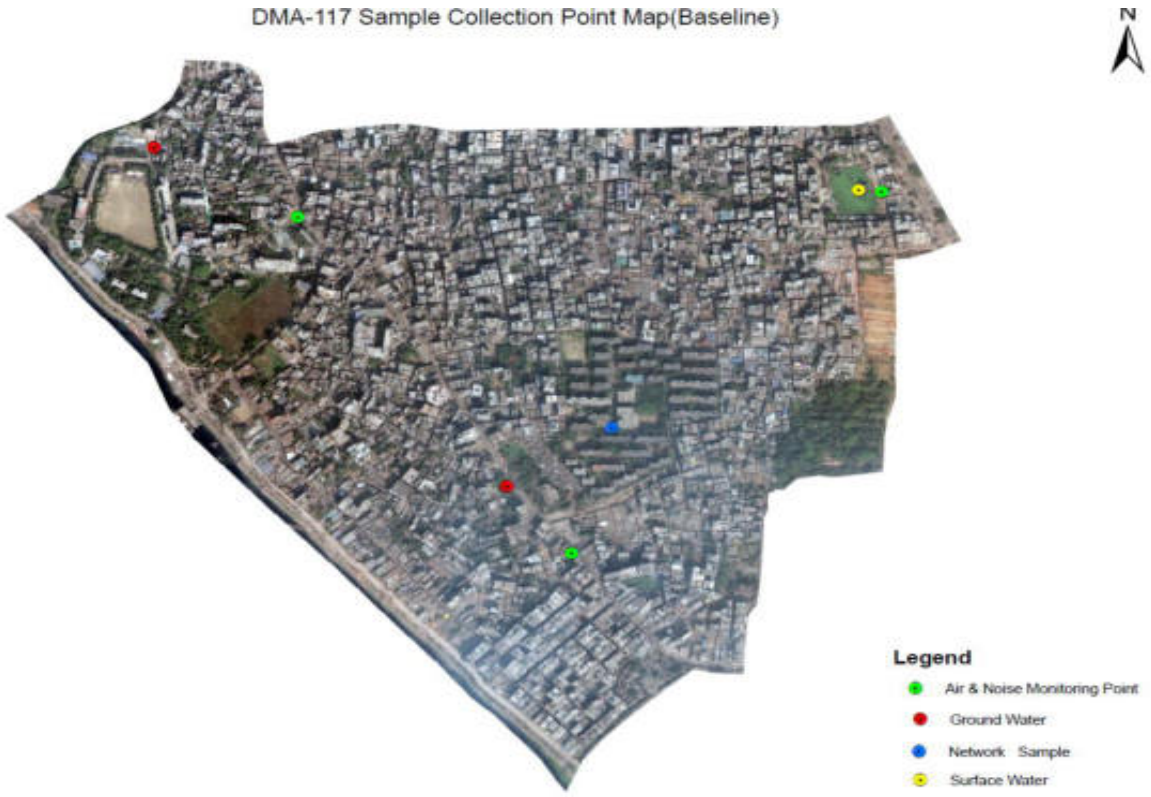
Environmental Parameters (Air, Noise & Water) Monitoring Location ICB 2.10, DMA 107



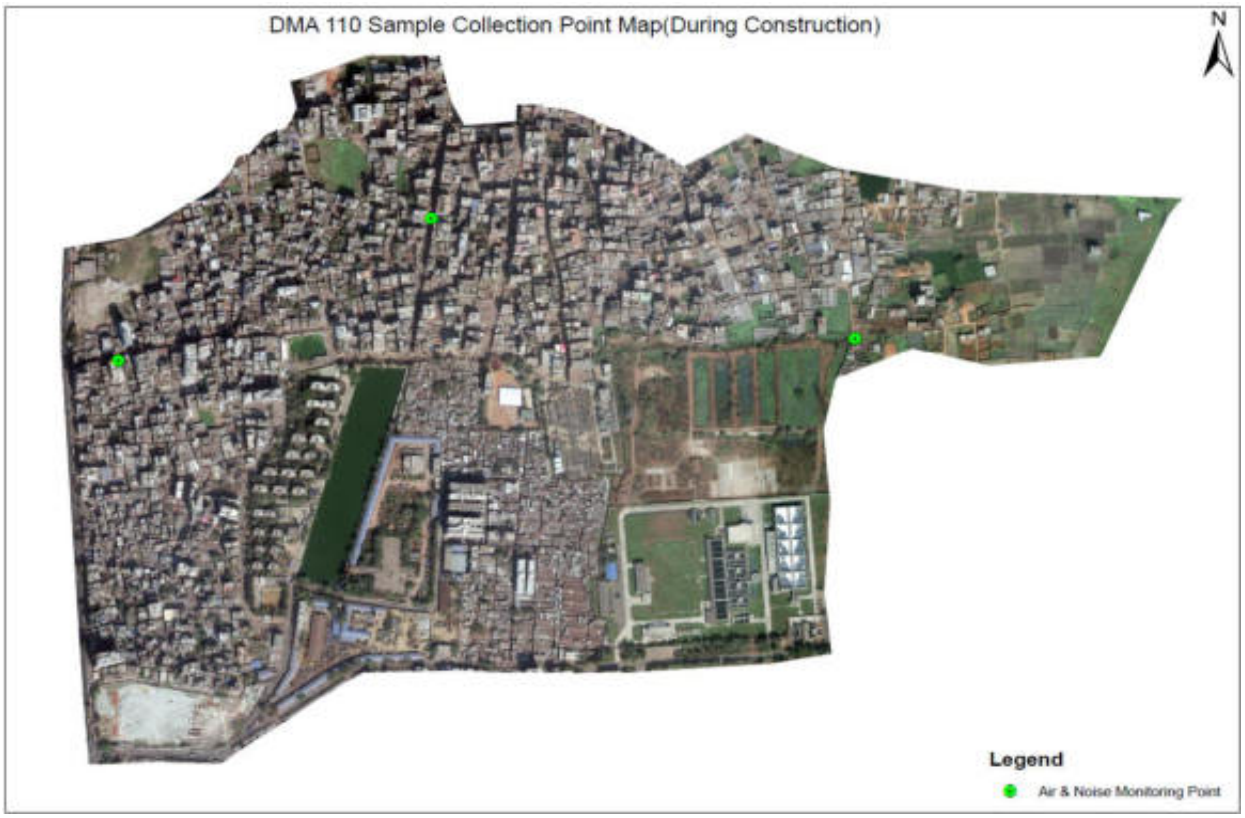
Environmental Parameters (Air, Noise & Water) Monitoring Location ICB 2.10, DMA 115



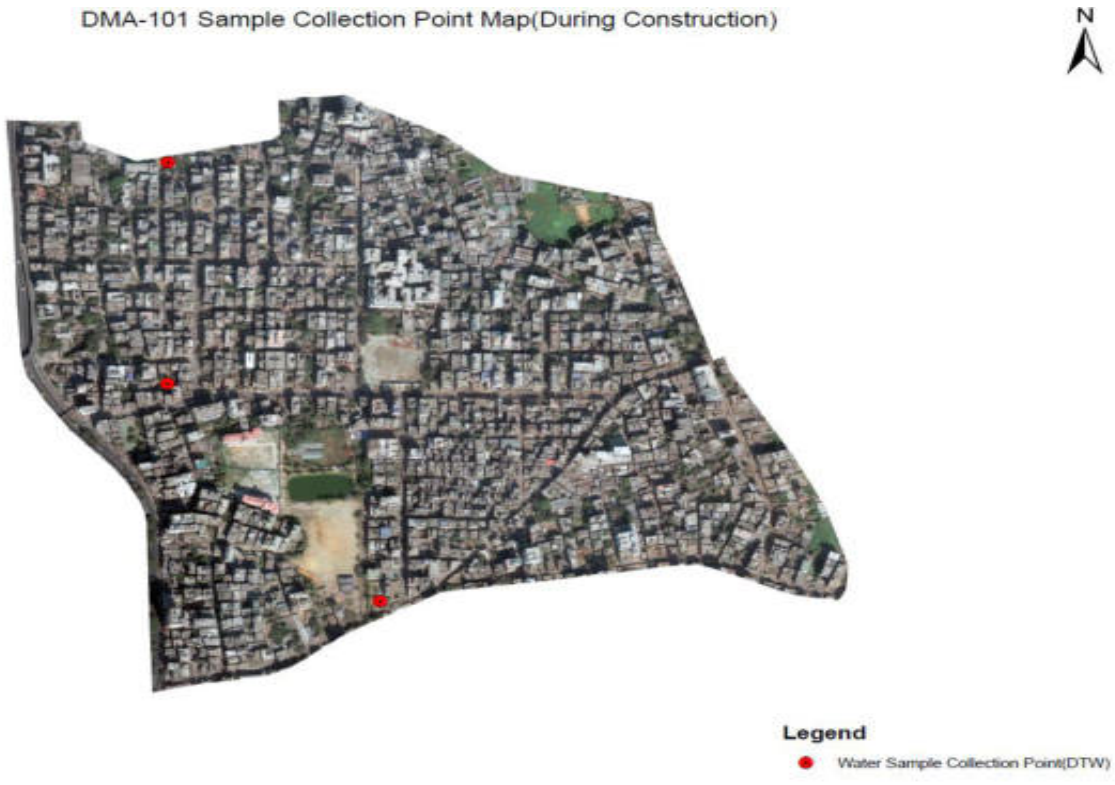
Environmental Parameters (Air, Noise & Water) Monitoring Location ICB 2.10, DMA 117



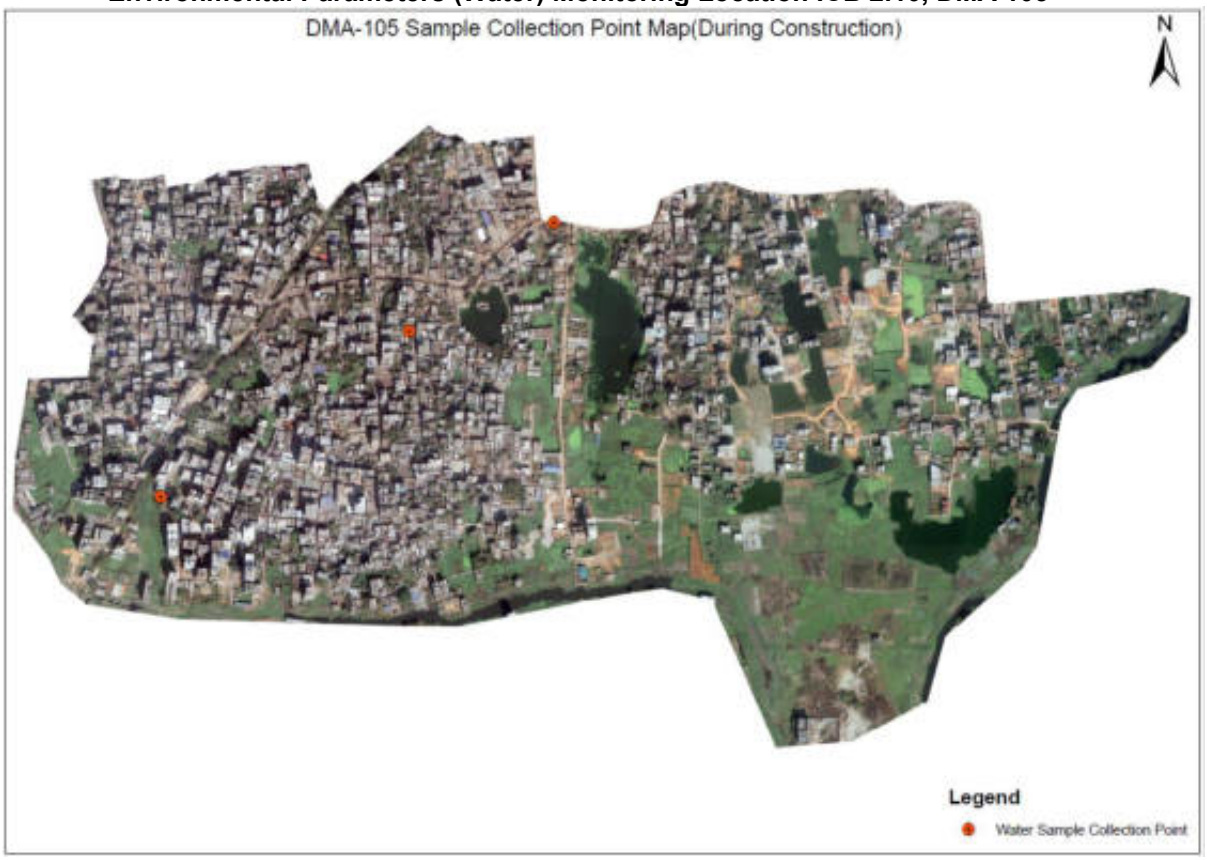
Environmental Parameters (Air & Noise) Monitoring Location ICB 2.10, DMA 110



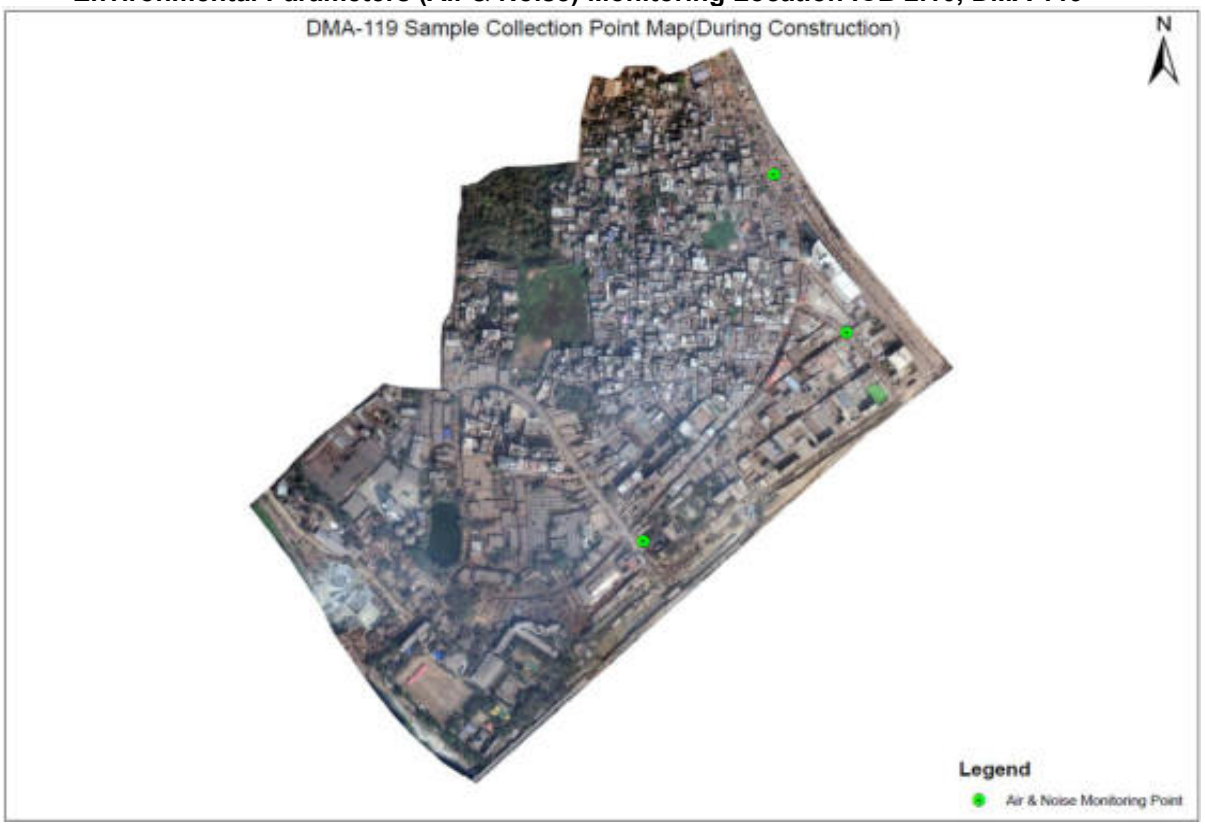
Environmental Parameters (Water) Monitoring Location ICB 2.10, DMA 101



Environmental Parameters (Water) Monitoring Location ICB 2.10, DMA 105

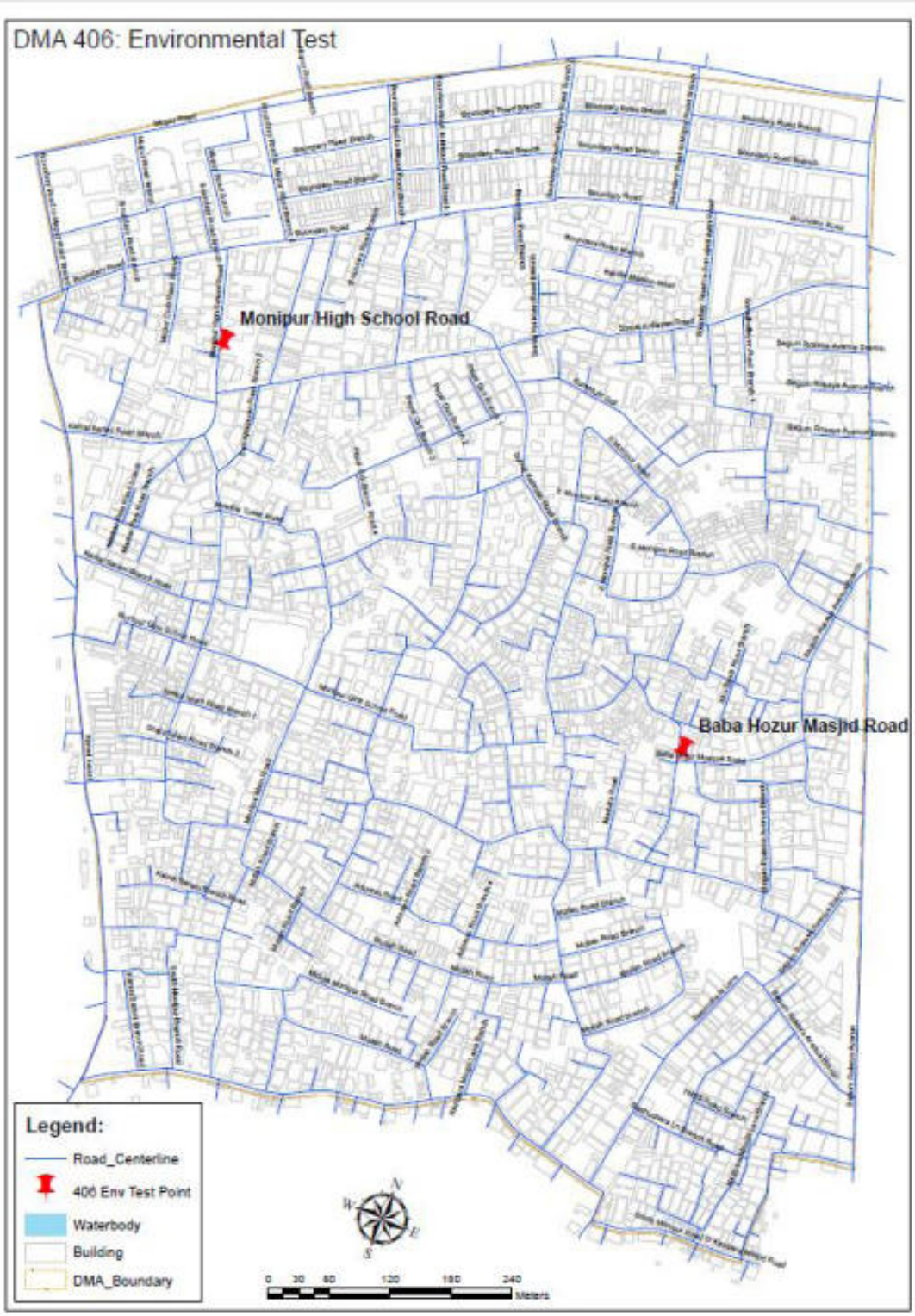


Environmental Parameters (Air & Noise) Monitoring Location ICB 2.10, DMA 119

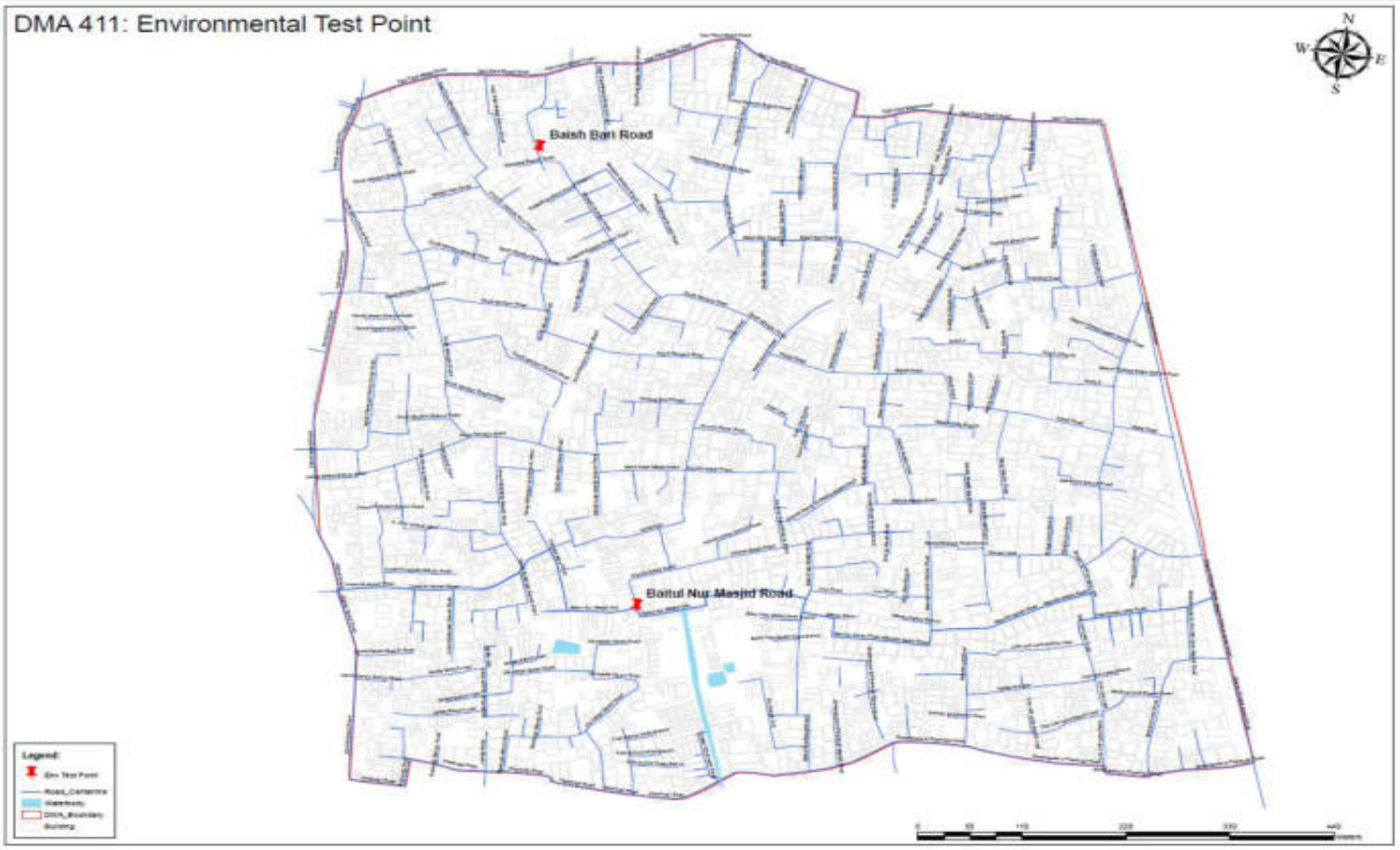


Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11B DMA 307

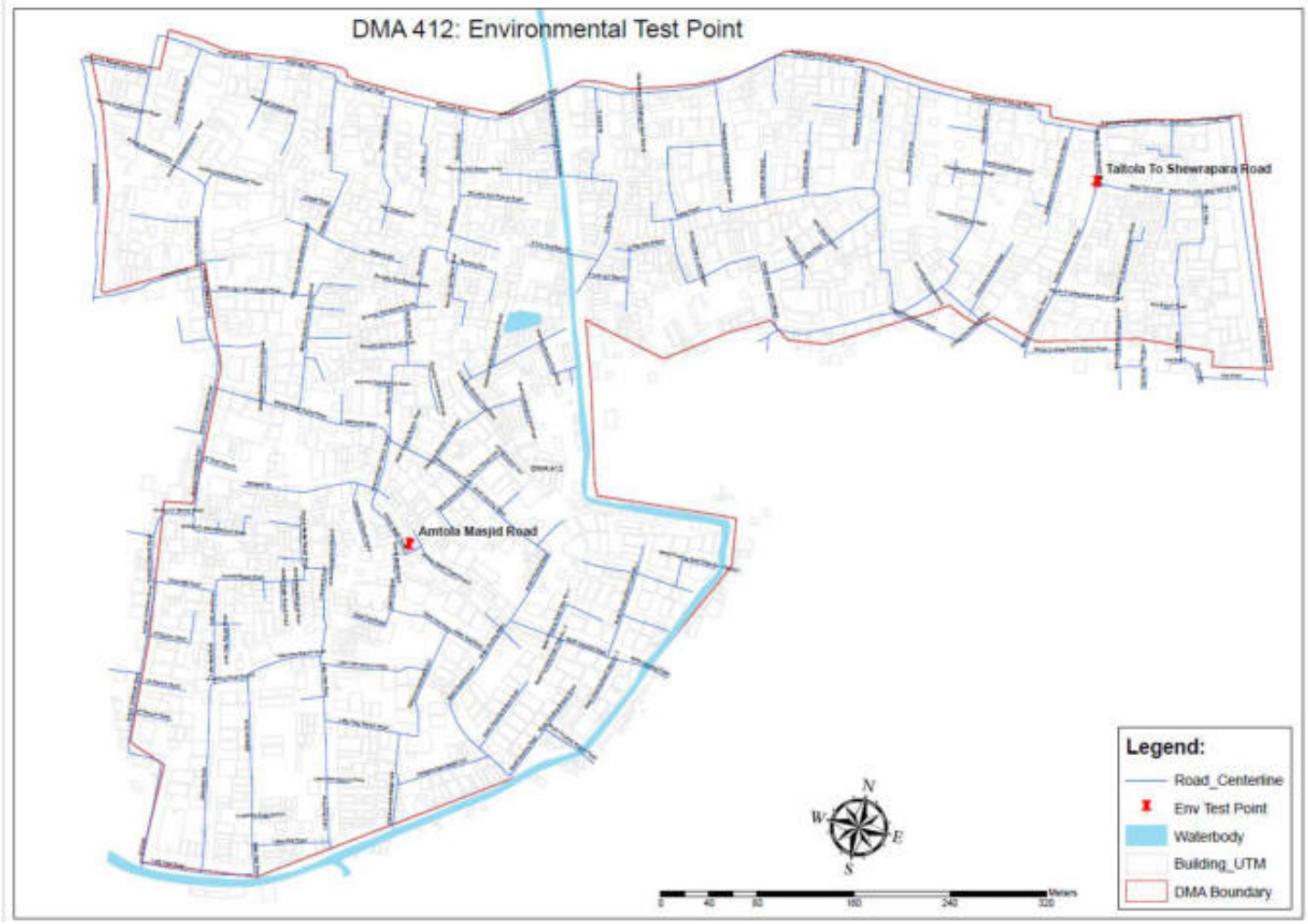
Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11C Lot-1 DMA 406



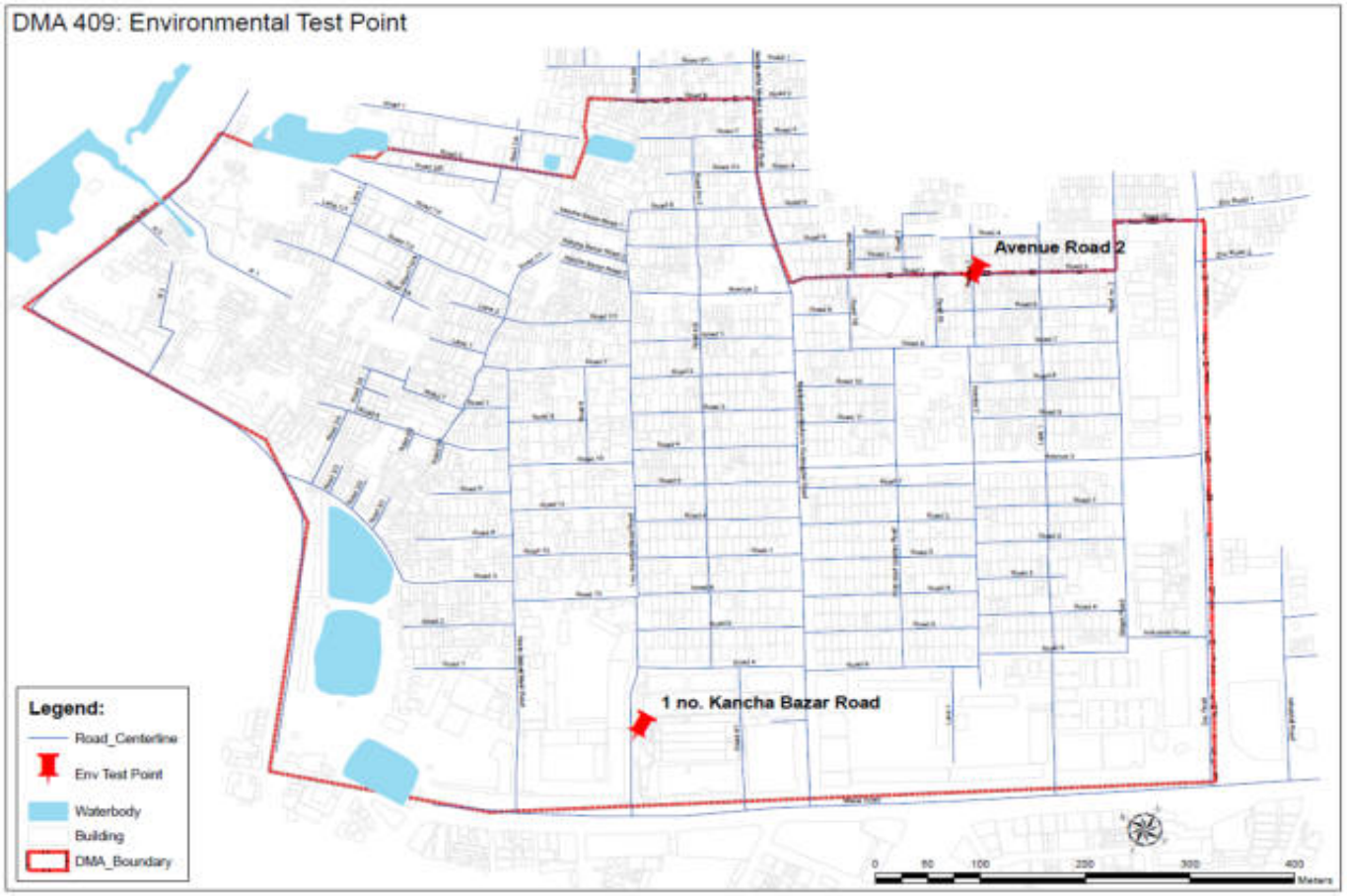
Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11C Lot-1 DMA 411



Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11C Lot-1 DMA 412



Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11C Lot-2 DMA 409



Environmental Parameters (Air, Noise & Water) Monitoring Location NCB-2.11D Lot-1 DMA 1010

Annex 10: Photographs and Attendance of the Consultation Meetings

Public Consultation Meeting Photos

Tea Stall Meeting at Sayedabad Rail Gate area in DMA-109A, areas (25-10-23)

Tea Stall Meeting at West Kafrul, Taltola Road in DMA-408, areas (19-10-23)

FGD Meeting at DMA-701 area (Adorsho Balika School-08-09-21)

FGD meeting at DMA-701 area (Shakdi road,Sonir Akhra-03.06.21)

Tea Stall Meeting at DMA-701 area (kutub khali,Jatrabari-01.06.21)

Tea Stall meeting at DMA-701 area (kutubkhali 04-09-21)

ATTENDENCE SHEETS OF CONSULTATION MEETINGS (SCANNED COPIES)

SAMAHAR

Dhaka Water Supply Network Improvement Project (DWSNIP)

NGO for Demand Management and Public Awareness Campaign

Name of the Meeting: Project Disclosure Meeting

Venue: 62 no. Ward Councillor's Office, Sheikhdi Chowrasta, Jatrabari, Dhaka.

ICB Package No: 2.12

Date: 26/10/2023

Time: 11 AM

DMA No: 701

SL #	Name of Participant	Profession / Designation	Address / Organization	Mobile Phone #	Signature	Remarks
1	[illegible]	62 No. Ward Councillor	Councillor Office	017[illegible]	[signature]	
2	[illegible]	Retd. Freedom F.	Sheikhdi	01218038844	[signature]	
3	Md. Moktarul Alam	TL	SAMAHAR	01771357500	[signature]	
4	Md Rezaul Alam	F Supervisor	Samahar	0191472[illegible]	[signature]	
5	Faruk Ahmed	P.E	F.S.L	01723759130	[signature]	
6	Md Abu Shadat	SARE(DMS)	DMS	01830260421	[signature]	
7	Lubna Islam	Samahar FS	Samahar	01760822311	[signature]	
8	Shahadat hossain	F.O	"	01915578814	[signature]	
9	Sakeb Mahmud	F.O.	"	01735555040	[signature]	
10	Jahid	F.O	"	01595408756	[signature]	
11	Abdus Subhan	F.O.	"	01721040725	[signature]	
12	Sohag	F.O	"	01734414780	[signature]	
13	Jaudshed Ahmed	A.O. RHP WASA	Shaadi	01726484564	[signature]	
14	Md Abdul Mannan	Housewife	"	01911311008	[signature] 26/10/23	
15	Nur Zahan	"	"	01911392446	[signature]	

Documented by:

Abdus Subhan Abdus

Jahidul Islam Zahid

Shahadat Hossain Shahadat 86

Designation: F.O.

Meeting DMA-701, 62 no. Ward Councillor Office, Sheikhdi Chowrasta, Jatrabari 26/10/23

DWSNIP Awareness Supervisor SAMAHAR

Male: 57

Female: 16

Total Participants: 73

SAMAHAR

Dhaka Water Supply Network Improvement Project (DWSNIP)
NGO for Demand Management and Public Awareness Campaign

Name of the Meeting: Project Disclosure Meeting
Date: 26/10/2023

Venue: 62 no. Ward Councillor's Office, Sheikhdi Chowrasta, Jatrabari, Dhaka.
Time: 11 AM

ICB Package No: 2.12
DMA No: 701

SL #	Name of Participant	Profession / Designation	Address / Organization	Mobile Phone #	Signature	Remarks
16	MD. Ashikun	Teacher	Sheikhdi	01753338498		
17	MD. Sayam	〃	〃	01814139045 01891		
18	MD. Mofazzel	〃	〃	01726789443		
19	Sultana	〃	〃	01710990313	Sultana	
20	Farhana Begum	〃	〃	01814139045		
21	Rajia Sultana	〃	〃	01608988088	Razia	
22	Babul	〃	〃	01731 404035		
23	MD. Akter Mallik	〃	〃	01715458987		
24	Roy	〃	〃	01913-160114		
25	Polas	〃	〃	01677777300	Polas	
26	Hamza	〃	〃	01720508531		
27	Sabuj	House owner	〃	01911275216		
28	MeyNA	〃	〃	01997097662		
29	Mahbubul Alam	〃	〃	01670856930		
30	Sufia	〃	〃	N/A		

Documented by:
Abdul Subhan
Jahidul Islam

Designation: FO

Male:
Female:
Total Participants:

Meeting of PDM Ward DMA-701, 62 no. Councillor Office, Sheikhdi

26/10/23

DWSNIP Awareness Supervision SAMAHAR

SAMAHAR

Dhaka Water Supply Network Improvement Project (DWSNIP)
NGO for Demand Management and Public Awareness Campaign

Name of the Meeting: Project Disclosure Meeting
Date: 26/10/2023

Venue: 62 no. Ward Councillor's Office, Sheikhdi Chowrasta, Jatrabari, Dhaka.
Time: 11 AM

ICB Package No: 2.12
DMA No: 701

SL #	Name of Participant	Profession / Designation	Address / Organization	Mobile Phone #	Signature	Remarks
31	MD. Helal	House owner	Sheikhdi	01727679390		
32	Fatema Begum	"	"	01882080920		
33	Amina	"	"	N/A		
34	Sumaia	"	"	N/A		
35	ASAD RIPON		"	01710930006		
36	SAMIR SARKER		"	0131-921-343		
37	MD. Mukul	House owner	"	01743822546		
38	Mohibul Alam	"	"	01670-856547		
39	Abdur Gofur	"	"	01711007287		
40	Monirul Islam	"	"	01677285257		
41	MD. Abdul Alim	"	"	01711589096		
42	MD. Faruk	"	"	01771572437		
43	MD. MOTAHAR	"	"	01677047137		
44	Abir Rahman	"	"	01635651443		
45	Tarikul Islam	"	"	01711349232		

Documented by:
Abdus Subhan
Jahidul Islam

Designation:

Male:
Female:
Total Participants:

Meeting of PDM
DMA- 701, 62 no. Ward councillor office
Sheikhdi, Jatrabari
26/10/23

DWSNIP
Awareness Supervisor
SAMAHAR

SAMAHAR

Dhaka Water Supply Network Improvement Project (DWSNIP)
NGO for Demand Management and Public Awareness Campaign

Name of the Meeting: Project Disclosure Meeting **Date:** 26/10/2023

Venue: 62 no. Ward Councillor's Office, Sheikhdi Chowrasta, Jatrabari, Dhaka. **Time:** 11 AM

ICB Package No: 2.12 **DMA No:** 701

SL #	Name of Participant	Profession / Designation	Address / Organization	Mobile Phone #	Signature	Remarks
61	Sumi	House owner	Sheikhdi	01814 201400		
62	Rumi	"	"	01914 210100		
63	Forzana	"	"	01724116151		
64	Jakida	"	"	01041246410		
65	Manik	"	"	01841600400		
66	Simon	"	"	01540214962		
67	Sohel	"	"	01814621402		
68	Dipon	"	"	01[illegible]262124		
69	Mumin	"	"	01624126548		
70	Rani	"	"	01841656901		
71	Toposhi	"	"	01712112284		
72	Zerin	"	"	01711412780		
73	Kabir	"	"	01721006770		

Documented by:

Abdus Subhan
Jahidul Islam

Designation:

Meeting of PDM DMA-701, 62 no. Ward Councillor Office, Sheikhdi

26/10/23

DWSNIP Awareness Supervisor SAMAHAR

Male:
Female:
Total Participants:

SAMAHAR

Dhaka Water Supply Network Improvement Project (DWSNIP)
NGO for Demand Management and Public Awareness Campaign

Name of the Meeting: Project Disclosure Meeting **Date:** 26/10/2023

Venue: 62 no. Ward Councillor's Office, Sheikhdi Chowrasta, Jatrabari, Dhaka. **Time:** 11 AM

ICB Package No: 2.12 **DMA No:** 701

SL #	Name of Participant	Profession / Designation	Address / Organization	Mobile Phone #	Signature	Remarks
46	[illegible]	House owner	Sheikhdi	01911669652		
47	MD. IKbal	U	U	01933623401		
48	MD. Sazzad	U	U	01827527713		
49	[illegible]	U	U	01981133766		
50	Arman	U	U	01961987633		
51	Abdur Sattar	U	U	01915090971		
52	Fatema	U	U	N/A		
53	MD. Shaifullah	U	U	01919091007		
54	MD. Babul	U	U	01921455961		
55	ATM Munir	Teacher	U	01731305253		
56	Kajol	House owner	U	01811412782		
57	Rahman	U	U	01814001700		
58	Dipjol	U	U	01624119141		
59	Badal	U	U	01920598240		
60	Nayon	U	U	01721400100		

Documented by:
Abdur Subhan
Jahidul Islam

Designation:

Meeting at PDM DMA-701, 62 no ward Councillor Office, Sheikhdi 26/10/23

DWSNIP Awareness Supervisor SAMAHAR

Male:
Female:
Total Participants:

Annex 11: Photographs and Records of Training and Workshop Carried out on Environmental Compliance During the Reporting period

	
Training for Fire Drill Risks & safety on 10.07.23	Training for Vehicles Fitness (timely maintenances & cleanliness), Safety Awareness, Mental and physical fitness 03.09.2023
	
Training on Fire Drill & Safety on 19.11.2023	Training for work Safety and health safety on 29.07.2023
	
Training on Job specific on 19.11.2023	Training for work Safety and health safety on 17.07.2023

Date: 10.07.2023, Location: DMA-101 (Bashabo -2 no water pump, Chayabithi)

Dhaka Water Supply Network Improvement Project (DWSNIP)
Contract Package of ICB-02.10
Safety Training Attendance

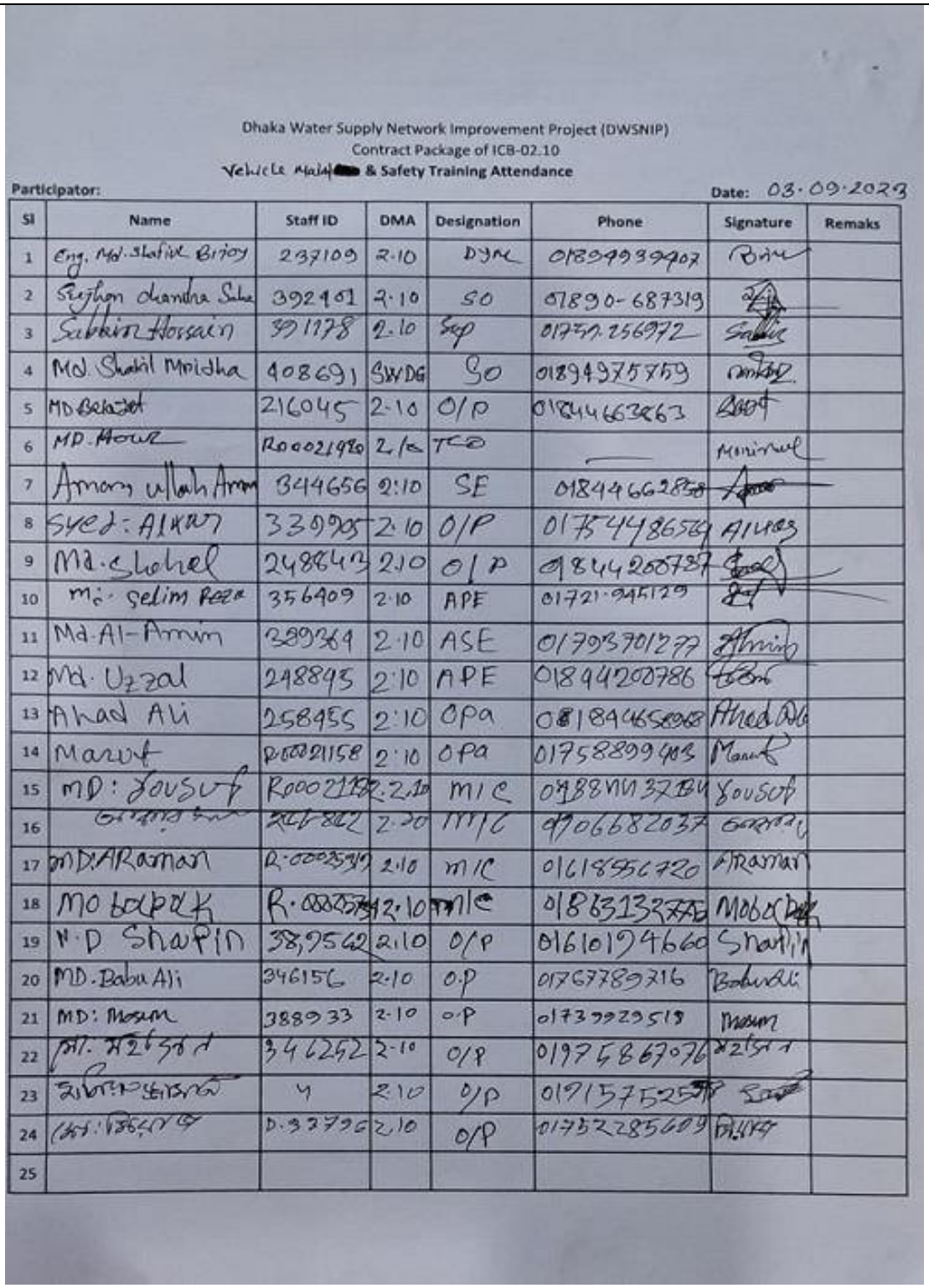
Participator:

Date: 10/07/23

Sl	Name	Staff ID	DMA	Designation	Phone	Signature	Remaks
1	MD. Jahidul	258449	101	S.A	01844601622	Jahid	
2	MD. faruk hossen	140156	101	welder	01844603165	[illegible]	
3	md: Razu mian	R0021205	105	S.A	01737480337	Razu	
4	MD: ILIAS	215961	101	PLMBR	01844661050	ILIAS	
5	MD. NAJIR	258953	101	PLMBR	01888767080	NAJIR	
6	MD. MASUD	R0025605	101	M/R	01929655385	masud	
7	MD. TANJIMUL	R0025805	101	M/R	01956071992	TANJIMUL	
8	MD: Rezaul	R0025502	101	m/R	01722169936	Rezaul	
9	mehedi Hasan Saboj	R0025438	101	SR	01765-826993	mehedi	
10	NUR-MUHAMMAD	R0025347	105	M/R	01880944458	Nur	
11	MD Raja mia	R0002189	101	M/R	01843868385	Rajamia	
12	MD. Shikhon Hossen	R0025513	101	M/R	01771488793	Shikhon	
13	Md. Roshed mia	391914	107	Stone Supervisor	01737-522733	R	
14	[illegible]	R025903	107	M/R	0194040475	[illegible]	
15	Md. mizanur Rahman	D43800	107	S.G	01739178029	[illegible]	
16	MD: Shamsul islam	D43799	107	S.G	01787077051	[illegible]	
17	MD. F2SAL	D85131	101	S.G	01186483238	F2SAS	
18	Mezba	169561	101	welder	01844657917	Mezba	
19	Salauddin	25511	101	M/R	01734435420	Salauddin	
20	MD: Arif	D45178	107	S.G	01618631837	Arif	
21	Sujoy	R0024225	101	M/R	01839553975	[illegible]	
22	mahabub	R0021170	101	welder	01960430511	[illegible]	
23	mehedi Hassan	R00020[illegible]	101	M/R	01814885654	mehedi	
24	Akib-uz-Zaman Anik	391177	107	En	01627832548	Anik	
25	MD: RAJAH	27291	101		01792225862	[illegible]	

[illegible]
10.7.23

Date: 03.09.2023 At kamalapur project office



Dhaka Water Supply Network Improvement Project (DWSNIP)
Contract Package of ICB-02.10
Vehicle Maint[illegible] & Safety Training Attendance

Participator: Date: 03.09.2023

Sl	Name	Staff ID	DMA	Designation	Phone	Signature	Remaks
1	Eng. Md. Shafiul Bijoy	237109	2.10	DyM	01899939907		
2	Sujhon chandra Saha	392401	2.10	SO	01890-687319		
3	Sabbir Hossain	391178	2.10	Sup	01731-256972		
4	Md. Shakil Moidha	408691	SWDG	SO	01894975759		
5	MD Belayet	216045	2.10	O/P	01844663663		
6	MD. Monir	R00021980	2/a	TCO			
7	Amam ullah Amm	344656	2.10	SE	01844662850		
8	Syed: Alam	330905	2.10	O/P	01754486569		
9	Md. Shahel	248643	2.10	O/P	01844260787		
10	Md. Selim Reza	356409	2.10	APE	01721-945129		
11	Md-Al-Amin	389364	2.10	ASE	01793701277		
12	Md. Uzzal	248893	2.10	APE	01844200786		
13	Ahad Ali	258455	2.10	OPa	01818465808		
14	Maruf	R00021158	2.10	OPa	01758899403		
15	MD: Yousuf	R00021[illegible]	2.10	MIC	01788[illegible]		
16	[illegible]	[illegible]	2.20	MIC	01706682037		
17	MD.ARaman	R.0002[illegible]	2.10	MIC	01618556720		
18	Mobarak	R.0002[illegible]	2.10	MIC	01863132[illegible]		
19	M.D Shafin	38,9542	2.10	O/P	01610194660		
20	MD. Babu Ali	346156	2.10	O.P	01767789216		
21	MD: Mosum	388933	2.10	O.P	01739929518		
22	[illegible]	346252	2.10	O/P	01975867076		
23	[illegible]	4	2.10	O/P	01915752[illegible]		
24	[illegible]	D.33796	2.10	O/P	01752285609		
25							

Participant List of Fire & Safety training (19.11.2023)

Dhaka Water Supply Network Improvement Project (DWSNIP)
Contract Package of ICB-02.10
Fire & Safety Training Attendance

Participator: Date:

Sl	Name	Staff ID	DMA	Designation	Phone	Signature	Remaks
1	Ali Akand	124786	CS	Executive	01844-601102	Ali	
2	Md. Firoz Akton	144946	CS	A m	01844603156	[illegible]	
3	Md. Noor Islam	378915	CS	AM	01896007994	[illegible]	
4	Md. Humayan	191846	CS	APE	01844661581	[illegible]	
5	md Shofiq sordar	R0025410	[illegible]	S.A	01905664940	Shofiq	
6	MD: Khalil	167795	CS	S.W	01844663376	[illegible]	
7	McRecon	25607	CS	M	01327416835	me	
8	MD. BABUL HOSSN	258058	CS	B.M	01711788946	Babul	
9	Priver	R00020610		S.W	01777001392	Brivey	
10	[illegible]	301624	CS	M/C	01767937022	[illegible]	
11	[illegible]	R00026388	CS		01892799009	[illegible]	
12	Jorsany	25610	CS.	S.W	01756837050	Jorsany	
13	[illegible]	R0025346	DTW	[illegible]	01703140125	[illegible]	
14	huntil		DM	S-G	01608936630	[illegible]	
15	Morond	45129	CS	S.G	[illegible]	Morond	
16	Anupkumar	D40824	CS	SG	01618556746	[illegible]	
17	Md. Nazmul	D.21218	[illegible]	S.g	01719905681	Nazmul	
18	Md. Imran	D45408	"	"	01859280610	Imran	
19	RAFIQUE	D40378	CS	A-SS	01844661492	[illegible]	
20	Md Jamsed Alam	11917	CS	Manager	01841257394	[illegible]	
21	Md Shafiul Islam Brijoy	237109	CS	DYM	01899939902	[illegible]	
22	Md Rasel Hossen	R00025321	CS	A/E	01709053293	[illegible]	
23	MD. Rajib	D25752	CS	DRIVER	01010779377	[illegible]	
24	Md. Rashedul Islam	193995	2.10	APE	01844-661910	Rashedul	
25	[illegible]	B0021206	CS		[illegible]	[illegible]	

SL	Name	Staff ID	DMA	Designation	Phone	Signature	Remaks
26	Md. Onahoj Mia	R00020406	CS	M/H	01317511666	Onahoj	
27	সুজন	২৫৭৫০	CS	M/H	013101973[illegible]	সুজন	
28	MD. Asif.	365285	CS	Auto/Me	01744876014	Asif	
29	মো: মামুন	New	CS	Driver	01887799[illegible]	মামুন	
30	মো: শামছুল কবির	162125	CS	Welder	01844658886	[illegible]	
31	Mahfuzur	49341	SRES	SR Electrician	01844-605071	[illegible]	
32	মো: আরিফিন	389562	CS	Driver	01610194660	আরিফিন	
33	Majed	346291	CS	Mason	01707341439	মাজেদ	
34	Omio Romion	R00020517	CS	W/A	01767856683	Omio	
35							
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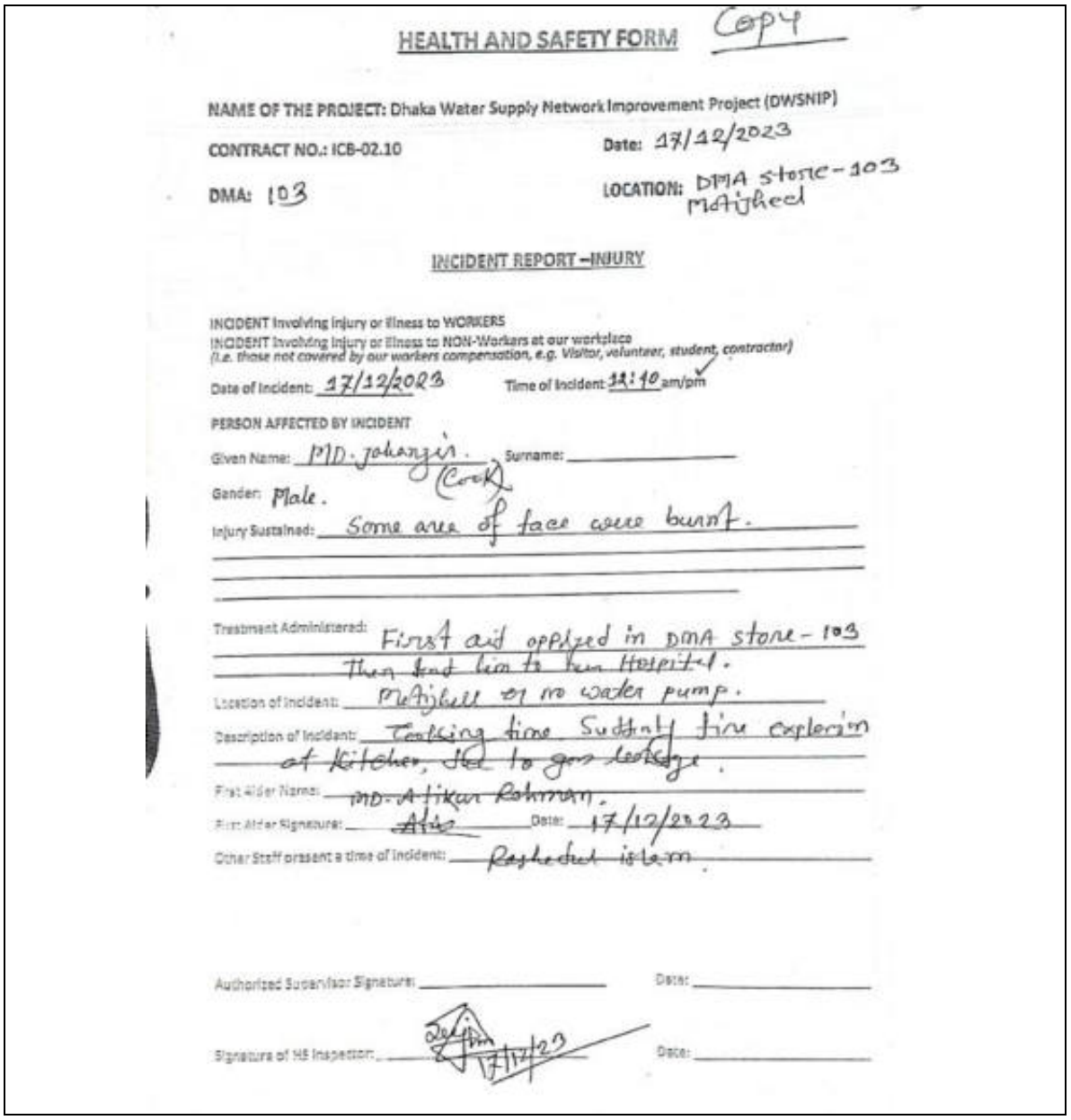
Annex 12: Records of Incident Report



HEALTH AND SAFETY FORM Copy

NAME OF THE PROJECT: Dhaka Water Supply Network Improvement Project (DWSNIP)

CONTRACT NO.: ICB-02.10 Date: 17/12/2023

DMA: 103 LOCATION: DMA store-103 Matijheel

INCIDENT REPORT –INJURY

INCIDENT Involving Injury or Illness to WORKERS
INCIDENT Involving Injury or Illness to NON-Workers at our workplace
(i.e. those not covered by our workers compensation, e.g. Visitor, volunteer, student, contractor)

Date of Incident: 17/12/2023 Time of Incident: 12:10 am/pm

PERSON AFFECTED BY INCIDENT

Given Name: MD. Johangir. Surname:

(Cook)

Gender: Male.

Injury Sustained: Some area of face were burnt.

Treatment Administered: First aid applied in DMA store-103 Then sent him to Ibn Hospital.

Location of Incident: Matijheel 01 no water pump.

Description of Incident: Cooking time Suddenly fire explosion at Kitchen, led to gas leakage.

First Aider Name: MD. Atikur Rahman.

First Aider Signature: Atik Date: 17/12/2023

Other Staff present a time of Incident: Rasheduel islam.

Authorized Supervisor Signature: Date:

Signature of HS Inspector: 17/12/23 Date:

HEALTH AND SAFETY FORM Copy

NAME OF THE PROJECT: Dhaka Water Supply Network Improvement Project (DWSNIP)

CONTRACT NO.: ICB-02.10 **Date:** 10/09/2023

DMA: 107. **LOCATION:**

INCIDENT REPORT –INJURY

INCIDENT Involving injury or illness to WORKERS

INCIDENT Involving injury or illness to NON-Workers at our workplace
(i.e. those not covered by our workers compensation, e.g. Visitor, volunteer, student, contractor)

Date of Incident: 10/09/23. Time of Incident: 12:00 am/pm

PERSON AFFECTED BY INCIDENT

Given Name: MD. Sujoy. (MR) Surname: —

Gender: Male.

Injury Sustained: The finger of the left leg was Cut. due to pressure of Rec box.

Treatment Administered: First aid was apply at DMA Stor-107 then send him to hospital.

Location of Incident: Rayerbazar water pump.

Description of Incident: when working at dma store 107 shifting Rec box suddenly fall down.

First Aider Name: the Safety box.

First Aider Signature: Md. Jogar Date: 20-07-26

Other Staff present a time of incident: 21/23 / MD. Hasan Mridha.

Authorized Supervisor Signature: ________ Date: ________

Signature of HS Inspector: 10/09/23 Date: ________

HEALTH AND SAFETY FORM Copy

NAME OF THE PROJECT: Dhaka Water Supply Network Improvement Project (DWSNIP)

CONTRACT NO.: ICB-02.10 Date: 18/07/2023

DMA: 107 LOCATION: Manda 5 no water pump.

INCIDENT REPORT –INJURY

INCIDENT Involving Injury or Illness to WORKERS
INCIDENT Involving Injury or Illness to NON-Workers at our workplace
(i.e. those not covered by our workers compensation, e.g. Visitor, volunteer, student, contractor)

Date of Incident: 18/07/23 Time of Incident: 13:20 am/pm

PERSON AFFECTED BY INCIDENT

Given Name: MD. Mehdi Hasan Surname: Papunn. (gainer)
ID: 215965

Gender: Male.

Injury Sustained: The youngest finger of the Right hand was cut.

Treatment Administered: Initial Treatment applying in the work site. & Emergency sending him to Dhaka medical.

Location of Incident: Manda 5 no water pump.

Description of Incident: Working on pump operation, the valve stop on the hand and cut the finger.

First Aider Name: Sushon Chandra Saha.

First Aider Signature: Date: 18/7/23

Other Staff present a time of incident: MD. Shahinur Rahman

Authorised Supervisor Signature: Date:

Signature of HS Inspector: 18/7/23 Date: 18/07/23

HEALTH AND SAFETY FORM Copy

NAME OF THE PROJECT: Dhaka Water Supply Network Improvement Project (DWSNIP)

CONTRACT NO.: ICB-02.10 Date: 19/07/2023.

DMA: Deonar central store, Deonar. LOCATION: Deonar.

INCIDENT REPORT –INJURY

INCIDENT Involving Injury or Illness to WORKERS

INCIDENT Involving Injury or Illness to NON-Workers at our workplace
(i.e. those not covered by our workers compensation, e.g. Visitor, volunteer, student, contractor)

Date of Incident: 19/07/2023 Time of Incident: 4:00 am/pm

PERSON AFFECTED BY INCIDENT

Given Name: Md. Sawapan. Surname: Dio.

Gender: Male. ID: R0002024

Injury Sustained: The finger of the left hand was cut (2 nos) due to Pressure of Rec meter box.

Treatment Administered: First aid applied in Deonar Central Store & send him to hospital.

Location of Incident: Deonar Central store.

Description of Incident: Rec meter box unloading time.

First Aider Name: MD. Jobir Hossain.

First Aider Signature: Date:

Other Staff present a time of incident: MD. Ali Hossain.

Authorized Supervisor Signature: Date:

Signature of HS Inspector: Date: 19.

Annex 13: Calibration certificate of Air & Noise Quality Equipment


CALIBRATION TECHNOLOGY PVT. LIMITED

CERTIFICATE OF CALIBRATION


CALIBRATION TECHNOLOGY PVT. LIMITED

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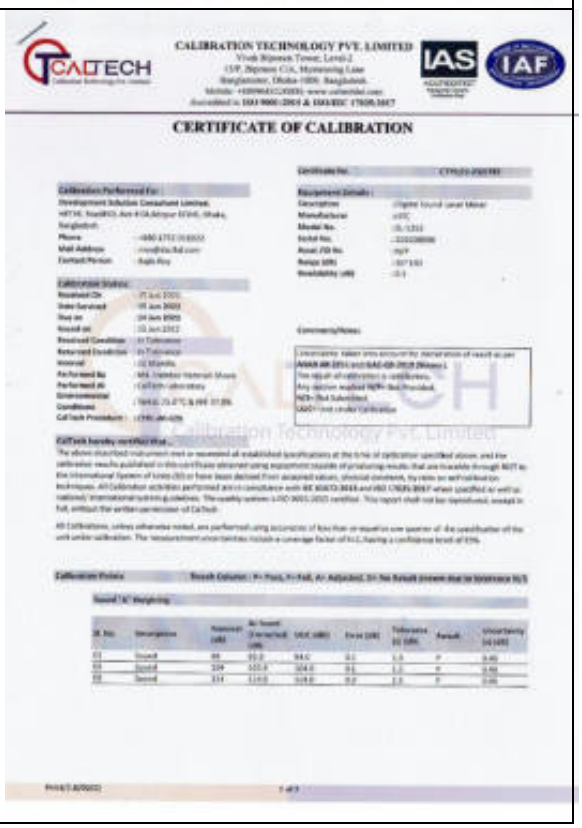

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Annex 14: Task specific Health and Safety Checklists

Checklist for Excavation Work

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering traffic management plan and H&S plan for the excavation works?				
2.	Has the contractor completed risk assessment for the excavation works?				
3.	Has the RFI completed for the excavation works?				
4.	Is the excavation permit/pre-dig permit obtained before starting work?				
5.	Is the contractor obtained road cutting permission from city corporation?				
6.	Is the contractor contacted traffic authority for the excavation work?				
7.	Is tool box meeting held before starting work?				
8.	Does the operator and signalman have the minimum experience for the job?				
9.	Have the workers provided appropriate PPEs?				
10.	Is there any physical barrier or caution tape deployed for the excavation pit?				
11.	Whether NGO has done the IEC activities?				
12.	Are there sufficient display warning signs at the excavation site?				
13.	Is the first aid box with required materials kept at site?				
14.	Are the rescue procedures completed and reserved at the site?				
15.	Are Display Board, Traffic diversion, Clean & Clear passage way provided?				
16.	Are excavated materials placed sufficiently away from water courses?				
17.	Are debris and waste materials transported to selected disposal places from temporary disposal site?				
	Trenches up to 2m:				
18.	Whether excavated material is dumped at least 1m away from trench wall?				
19.	Whether the extra material is removed?				
20.	In case of Ground water whether pumped water is drained properly?				
	Trenches & pits depth of more than 2m:				
21.	Whether firm barricades are provided?				
22.	In case of loose soil strata whether shoring is provided?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Traffic Management

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the Contractor completed the Method Statement considering traffic management plan?				
2.	Is the Contractor contacted with DMP before starting the construction work?				
3.	Is there traffic control supervisor present at construction site?				
4.	Is toolbox meeting held before starting the work?				
5.	Have every driver and equipment operators their valid driving license?				
6.	Are the traffic controllers and supervisors trained and accredited?				
7.	Are traffic signages available around the construction sites and nearby roads?				
8.	Are re-routing signage sufficient to guide motorists?				
9.	Are flagmen present to direct traffic during construction hour?				
10.	Are the excavation sites along roads provided with barricades with reflectors?				
11.	Are Display Board, Traffic diversion, clean & clear passage way provided?				
12.	Are there sufficient display warning signs available for traffic movement?				
13.	Are the excavation sites provided with sufficient lighting at night?				
14.	Is the first aid box with required materials kept at site?				
15.	Are the rescue procedures completed and reserved at site?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Electrical Work

DMA No. / Package: _____ Date: _____

Location: _____

Description		Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed risk assessment for the electrical works?				
2.	Are all the electrical equipment operated by licensed electrician?				
3.	Are all electrical components certified?				
4.	Are all the electrical equipment checked before operation?				
5.	Whether the workers are using proper gloves and goggles?				
6.	Whether required earthing is provided for equipment?				
7.	Whether proper wiring & connections boards with RCCB (30mA) fuse are being used?				
8.	Is the electrical equipment are kept on dry place, barricaded to avoid accidental contact by stakeholder?				
9.	Is the area barricaded and using flags where electrical work is conducting?				
10.	Are emergency contact details available on-site in case of electrocutions or burns?				
11.	Is toolbox meeting held before starting the work?				
12.	Are there a medical first aid kits available on site for primary medical care?				
13.	Are the rescue procedures completed and reserved at the site?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Fire Safety

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering fire safety plan and H&S plan for the fire safety?				
2.	Has the contractor completed risk assessment for the fire?				
3.	Is toolbox meeting held before starting the work?				
4.	Are there firefighting equipment on site?				
5.	Are there fire extinguisher available at labour shed?				
6.	Are all the firefighting equipment operated by trained & experienced operators?				
7.	Are emergency contact details available on-site in case of fire burns?				
8.	Are emergency contact details available at labour shed in case of fire burns?				
9.	Are there a medical first aid kits available on site for primary medical care?				
10	Are the rescue procedures completed and reserved at the site?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for DTW works

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering Deep Tube well Work and H&S plan for the DTW works?				
2.	Has the contractor completed risk assessment for the DTW works?				
3.	Is the contractor informed Zonal Authorities and Councillor before starting work?				
4.	Is the contractor informed Electrical Authorities before starting the work				
5.	Is the contractor contacted traffic authority before starting the work?				
6.	Is tool box meeting held before starting work?				
7.	Does the operator have the minimum experience for the job?				
8.	Have the workers provided appropriate PPEs?				
9.	Is there any physical barrier or caution tape deployed for the excavation pit?				
10.	Whether NGO has done the IEC activities?				
11.	Are there sufficient display warning signs at the DTW work site?				
12.	Is the first aid box with required materials kept at site?				
13.	Are the rescue procedures completed and reserved at the site?				
14.	Are Display Board, Traffic diversion, Clean & Clear passage way provided?				
15.	Are excavated materials placed sufficiently away from water courses?				
16.	Are debris and waste materials transported to selected disposal places from temporary disposal site?				
17.	Whether firm barricades are provided?				
18.	In case of loose soil strata whether shoring is provided?				
19.	Do generators operate with doors closed or provided with sound barrier around them?				
20.	Do workers use ear plugs/hearing protections at noise generating locations?				
21.	Are neighbouring residents notified in advance of any noisy activities expected at construction sites?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Asbestos Cement Pipe

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
		Yes	No	NA	
1.	Has the contractor completed the Method Statement considering safety for asbestos cement pipe?				
2.	Has the RFI completed for the asbestos cement pipe?				
3.	Has the contractor identified presence, location & quantity of all asbestos cement pipe?				
4.	Is the marked map of AC pipe available on site?				
5.	Is the safety procedure of AC pipe available on site?				
6.	Has the safety supervisor conducted toolbox meeting regarding AC pipe?				
7.	Has the contractor attached signs or labels so workers and supervisors know to avoid the area of AC pipe?				
8.	Is sufficient distance maintained between existing AC pipes and newly installed pipes?				
9.	Is the area of AC pipe marked and barricaded?				
10	Is drinking and smoking prohibited in the work areas?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Dust Control & Noise Control

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
	Dust Control	Yes	No	NA	
1.	Is the construction site watered to minimize generation of dust?				
2.	Are roads within and around the construction sites sprayed with water on regular intervals?				
3.	Is there a speed control for vehicles carrying soils and other spoils covered?				
4.	Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?				
5.	Are construction vehicles carrying soils and other spoiled covered?				
6.	Are generators provided with air pollution control devices?				
7.	Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid permits?				
	Noise Control	Yes	No	NA	
1.	Is the work only taking place between 7 am to 7 pm, week days?				
2.	Do generators operate with doors closed or provided with sound barrier around them?				
3.	Do workers use ear plugs/hearing protections at noise generating locations?				
4.	Is idle equipment turned off or throttled down?				
5.	Are neighbouring residents notified in advance of any noisy activities expected at construction sites?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature

Checklist for Occupational Health & Safety and Community Health & Safety

DMA No. / Package: _____ Date: _____

Location: _____

	Description	Observation			Remarks
1.	Supervision and Management On-Site	Yes	No	NA	
	a. Is an EHS supervisor available?				
	b. Is a copy of the SEMP available at construction site?				
	c. Are daily toolbox meetings conducted on site?				
2.	Facilities	Yes	No	NA	
	a. Are there a medical first aid kits available on site?				
	b. Are emergency contact details available on-site?				
	c. Are there PPEs available; Helmet, HI-VIS Vest, Gumboots, Eye Wear, Dust Mask, Safety Gloves, Earplugs?				
	d. Are the PPEs in good condition?				
	e. Are there firefighting equipment on site?				
	f. Are there separate mobile sanitary facilities for male and female workers?				
	g. Are sanitary facilities cleaned and disinfected regularly?				
	h. Is drinking water supply available for workers?				
3.	Occupational Health and Safety	Yes	No	NA	
	a. Are the PPEs being used by workers				
	b. Is breaktime for workers provided?				
	c. Is construction work site barricaded with caution tape?				
4.	Community Health and Safety	Yes	No	NA	
	a. Are safety signages posted around the sites?				
	b. Are temporary and safe walkways for pedestrians available near work sites?				
	c. Are consultation meeting/focus group discussion/tea stall meeting arranged regularly on site?				
	d. Are existing users notified in advance about temporary disruption of water supply?				
	e. Are Leaflets distributed on site to inform the local residents about the project work?				
	f. Is complain book available on work site to receive complain from local people?				

5.	Recording System	Yes	No	NA	
	a) Do the contractors have recording system for SEMP implementation?				
	b) Are the daily monitoring sheets accomplished by the contractor EHS supervisor (or equivalent) properly complied?				
	c) Are laboratory results of environmental sampling conducted since the commencement of construction activities properly complied?				
	d) Are these records readily available at the site and to the inspection team?				
	e) Are utility accidents recorded and proper actions are taken immediately?				
	f) Are public complaints recorded at construction site and addressed quickly and properly?				
	g) Are there any registered book available at construction site/stockyard for visitors/inspection teams?				
	h) Is there any Complain box available for anonymous complain at construction site/stockyard?				

Contractor's representative:

_____

Name, Designation and Signature

DMS representative:

_____

Name, Designation and Signature