

Final Addendum to Initial Environmental Examination

PUBLIC

**Project No. 51137-003
September 2024**

Bangladesh: Dhaka and Western Zone Transmission Grid Expansion Project

Addendum- 5 (Package 2 and 5)- Part B

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

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APPENDIX

APPENDIX A: Photographs of the Existing Environment and Public Consultations

Existing Environment

Rampura- Bashundhara 132kV Underground Cable Line, Kaliganj, and Purbachal Substations



Bashundhara part of Rampura- Bashundhara 132kV Underground Cable Line



North Side of Kaliganj Substation



South Side of Kaliganj Substation



North Side of Kaliganj Substation



North Side of Purbachal Substation



South Side of Purbachal Substation

Appendix A-1: The Safeguard Consultation Photographs (March 2024)

Rampura- Bashundhara 132kV Underground Cable Line



Rampura- Bashundhara 132kV Underground Cable Line

Appendix A-2: Two Substation Locations (Kaliganj, and Purbachal Substations)



Kaliganj Substations



Purbachal Substations

Appendix B: Attendance of Consultations

Dhaka & Western Zone Grid Expansion Project

Location:	আমারী আওলিহা (পূর্বাচল প্রাথমিক)		
Date:	০০.০৪.২০২৪	Time:	১৬.০০

Sl.	Name of Participants	Age	Occupation	Signature
1.	আবদুল মিন	৫০	চাকরী	[Signature]
2.	নূরুল আমিন	২৫	ছাত্র	[Signature]
3.	হাবিব আহমেদ	৬৭	ব্যবসা	[Signature]
4.	আঃ নাসরত	২২	ছাত্র	[Signature]
5.	জায়েদ আলম	৬৮	ব্যবসা	[Signature]
6.	আবদুল বাকির	৪৮	ব্যবসা	[Signature]
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Dhaka & Western Zone Grid Expansion Project

Location: বাঙ্গা লিফট রাস্তা (পূর্বচল মাগুরা)
 Date: ০২.০৮.২০২৪ Time: ১১.১০

Sl.	Name of Participants	Age	Occupation	Signature
1.	মাহমুদ ইমরান	৬৮	কৃষি(মক)	মাহমুদ
2.	আঃ হামান	৪০	চাকরী	Roman
3.	আব্দুল হাকিম	৬২	"	আব্দুল হাকিম
4.	শেহনে আরা তায়ন	৬৬	"	শেহনে-আরা
5.	ফের্মিন	৬৬	কৃষি	Fermin
6.	আহমেদ রহমান	৬২	চাকরী	Muski Fuzon
7.	জাহা আলম	৪৭	কৃষি(মক)	জাহা
8.	বাজন চন্দ	২২	ছাত্র	Rajon Rander
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Dhaka & Western Zone Grid Expansion Project

Location: মুন্সি নগর (মির্জাপুর-আবদুল্লাহ)
 Date: ২৭.০৬.২০১৪ Time: ১৫:৪০

Sl.	Name of Participants	Age	Occupation	Signature
1.	জমীন্ ডালিম	৪৫	কৃষি	
2.	আবু	৬৫	ব্যবসা	Somud
3.	জুয়েল হোসেন	৬০	"	জুয়েল
4.	আবির	২৭	"	
5.	জাহান্না	২৪	দৃশ	Zakaria
6.	বেজিনা খাতুন	২২	গ্রাহী	বেজিনা
7.	নাজমা আক্তার	৬০	"	নাজমা
8.	আটি বেগম	৬০	"	
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Dhaka & Western Zone Grid Expansion Project

Location: নাগরী - (সীতাহাতি, কান্দিগল্লি মারফিঙ্গন)
 Date: ২৮.০৬.২০২৪ Time: ১০:৬০

Sl.	Name of Participants	Age	Occupation	Signature
1.	মোঃ বাজেন	৬২	ব্যবসা	বাজেন
2.	বাহুমা আক্তার	৬০	চাকরী	baahuma
3.	আব্দুল রহমান	২৭	চাকরী	rahman
4.	আমজোকা	৪২	হুসি	আব্দোজা
5.	কামরুজ্জামান	৬৬	"	Kashfia
6.	আদিয়া আক্তার	২৮	"	
7.	দেলোয়ার হোসেন	৬৯	চাকরী	দেলোয়ার
8.	হুমায়ুন	৬৮	কৃষি	
9.	মাহমুদ হুসেইন	৬২	"	মাহমুদ
10.	আলমগীর	৪২	"	
11.				
12.				
13.				
14.				
15.				

Dhaka & Western Zone Grid Expansion Project

Location:	বজারঘুং বাজার (সুলতান হাট, কলকাতা-১০০০১০)	
Date:	২৬. ০৬. ২০২৪	Time: ১২:৪৫

Sl.	Name of Participants	Age	Occupation	Signature
1.	আল হাদুদ	৬৯	চাকরি	আল হাদুদ
2.	মাইনুদ্দিন	৬০	চাকরি	Maimuddin
3.	আইয়ুব	২০	ছাত্র	আইয়ুব
4.	মিলন মিঠা	২৯	ব্যবসা	
5.	আবদুস সাদেক	৪০	কৃষি	
6.	সোনিয়া	২৭	গৃহিণী	
7.	রাজা মিঠা	৬৭	ব্যবসা	রাজা
8.	পলাশ	৬৬	কৃষি	
9.	আল আমিন	৩২	চাকরি	Alamin
10.	সুলতান হাট	৬৪	গৃহিণী	
11.	বিউটি লারজিন	৬০	"	বিউটি
12.	বাবু নাহার	৬৬	"	
13.				
14.				
15.				

Dhaka & Western Zone Grid Expansion Project

Location:	বজারঘুং বাজার (সুলতান হাট, কলকাতা-১০০০১২)	
Date:	২৬.০৬.২০২৪	Time: ১২:৪৫

Sl.	Name of Participants	Age	Occupation	Signature
1.	আল হাদুদ	৬৯	চাকরি	আল হাদুদ
2.	মাইনুদ্দিন	৬০	চাকরি	Maimuddin
3.	আইরিন	২০	ছাত্রী	আইরিন
4.	মিলন মিঠা	২৯	ব্যবসা	
5.	আবদুস রহমান	৪০	কৃষি	
6.	সোনিয়া	২৭	গৃহিণী	
7.	রাজা মিঠা	৬৭	ব্যবসা	রাজা
8.	পলাশ	৬৬	কৃষি	
9.	আল আমিন	৩২	চাকরি	Alamin
10.	সুলতান ফাহান	৬৪	গৃহিণী	
11.	বিউটি লারজান	৬০	"	বিউটি
12.	বাবু নাহার	৬৬	"	
13.				
14.				
15.				

Appendix C: Environmental Monitoring (Lab sheet)

Appendix C-1: Rampura- Bashundhara 132kV Underground Cable Line

Environmental Baseline Monitoring Report

Annex 1: Air Quality Analysis




Ref: ECIL/2024/140-03/AAQM

Test Results of Ambient Air Quality Analysis									
Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]								
Description of Sample	: Near the Substation Area in Bashundhara Residential Area								
Sample Collector	: Collected by EnviroCare Technical Team								
Sample Date	: 19.02.2024								
Date of Analysis	: 20.02.2024-14.03.2024								
Reporting Date	: 18.03.2024								

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM ₁₀	PM _{2.5}	Pb	SO ₂	NO _x	O ₃	CO
1	AAQM-1-Near the Substation Area in Bashundhara Residential Area GPS: 23.81644N 90.43622E	102.19	61.23	24.11	BDL	16.82	29.24	13.93	1.31
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³
	Duration	8	24	24	24	24	24	8	8
	Method of Analysis	Light Scattering Nephelometer			AAS	High Sensitivity Electrochemical			
	Bangladesh Standard	200	150	65	0.5	80	80	100	5

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

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

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

Serial No.	Temperature	Humidity	Wind Speed
01	31.15 degree Celcius	48.67%	1.11 m/s

Source: On site Recording by Anemometer



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DHAKA AND WESTERN ZONE TRANSMISSION GRID EXPANSION PROJECT
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Environmental Baseline Monitoring Report



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Ref: ECI/2024/141-03/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project (Package 2)
Description of Sample	: Near United International University (UIU) Mosque
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 19.02.2024
Date of Analysis	: 20.02.2024-14.03.2024
Reporting Date	: 18.03.2024

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM ₁₀	PM _{2.5}	Pb	SO ₂	NO _x	O ₃	CO
1	AAQM-2-Near United International University (UIU) Mosque GPS: 23.79979N 90.44887E	84.25	57.43	17.82	BDL	27.49	40.23	17.56	2.86
	Unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³
	Duration	8	24	24	24	24	24	8	8
	Method of Analysis	Light Scattering Nephelometer			AAS	High Sensitivity Electrochemical			
	Bangladesh Standard	200	150	65	0.5	80	80	100	5

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

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

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

Serial No.	Temperature	Humidity	Wind Speed
01	30.8 degree Celsius	49.25%	2.65 m/s

Source: On site Recording by Anemometer



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2

Environmental Baseline Monitoring Report



Ref: ECIL/2024/142-03/AAQM

Test Results of Ambient Air Quality Analysis

Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project (Package 2)
Description of Sample	: Near the Substation Area of Aftabnagar
Sample Collector	: Collected by EnviroCare Technical Team
Sample Date	: 20.02.2024
Date of Analysis	: 21.02.2024-14.03.2024
Reporting Date	: 18.03.2024

Sl. No.	Sample Locations	Concentration presents different parameters in ambient air							
		SPM	PM ₁₀	PM _{2.5}	Pb	SO ₂	NO ₂	O ₃	CO
1	AAQM-3- Near the Substation Area of Aftabnagar GPS: 23.76667N 90.43124E	77.63	37.14	14.68	BDL	19.26	24.17	14.21	2.01
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³
Duration		8	24	24	24	24	24	8	8
Method of Analysis		Light Scattering Nephelometer			AAS	High Sensitivity Electrochemical			
Bangladesh Standard		200	150	65	0.5	80	80	100	5

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

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

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

Serial No.	Temperature	Humidity	Wind Speed
01	31.7 degree Celsius	47.75%	1.8 m/s

Source: On site Recording by Anemometer



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Annex 2: Noise Quality Analysis



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Ref: ECIL/2024/143-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near the Substation Area in Bashundhara Residential Area
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	Lmax	Lmin	Leq	Lmax	Lmin	
ANLM-1 Near the Substation Area in Bashundhara Residential Area	51.38	81.7	49.8	37.34	58.4	33.9	Mixed
Bangladesh Standard							Day Time
Industrial area							75
Commercial							70
Mixed area							60
Residential area							55
Silent Area							40
World Bank / IFC Standard							Day Time
Industrial area							70
Residential, Institutional, Educational							55



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1

Environmental Baseline Monitoring Report



Ref: ECIL/2024/144-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near United International University (UIU) Mosque
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

Sl. No	Sample Locations	Sampling ID
2	Near United International University (UIU) Mosque 23.79962N 90.44888E	ANLM-2

Test Result

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	Lmax	Lmin	Leq	Lmax	Lmin	
ANLM-2 Near United International University (UIU) Mosque	46.82	84.2	43.9	39.13	64.7	33.1	Silent
Bangladesh Standard							Day Time Night Time
Industrial area							75 70
Commercial							70 60
Mixed area							60 50
Residential area							55 45
Silent Area							50 40
World Bank / IFC Standard							
Industrial area							70 70
Residential, Institutional, Educational							55 45



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2

Environmental Baseline Monitoring Report



Ref: ECIL/2024/145-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near the Substation Area of Aftabnagar
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	Lmax	Lmin	Leq	Lmax	Lmin		
ANLM-3	49.73	67.8	43.6	41.92	71.4	40.1	Mixed	
Near the Substation Area of Aftabnagar								
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential, Institutional, Educational							55	45



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3

Environmental Baseline Monitoring Report



Ref: ECIL/2024/146-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near United International University (UIU)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	Lmax	Lmin	Leq	Lmax	Lmin	
ANLM-4 Near United International University (UIU)	53.62	79.8	46.4	41.34	70.2	35.6	Mixed
Bangladesh Standard							Day Time
Industrial area							75
Commercial							70
Mixed area							60
Residential area							55
Silent Area							50
World Bank / IFC Standard							Night Time
Industrial area							70
Residential, Institutional, Educational							55



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Environmental Baseline Monitoring Report



Ref: ECIL/2024/147-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project (Package 2)
Description of Sample : Near Base Camp Area
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	Lmax	Lmin	Leq	Lmax	Lmin		
ANLM 5 Near Base Camp Area	54.25	78.4	44.3	40.57	65.2	35.4	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential, Institutional, Educational							55	45



Prepared By
 Md. Shamim Biswas
 B.Sc. in Environmental Science (KU)
 Consultant (Environment) & Lab-in-charge

Reviewed By
 Sanjoy Kumar Mondol
 B.Sc. in ESRM (MBSTU)
 MSc in Environmental Science (MBSTU)
 Technical Manager

Approved By
 Shorov Roy
 B.Sc. in ESRM (MBSTU)
 MSc in Environmental Science (BAU)
 Quality Manager

Address: House #9 (3rd Flr), Road # 6, Sector # 12, Uttara, Dhaka-1230, Bangladesh. Cell: 01925687029,
 Phone: +88 0255087283, Web: www.envirocarebd.com, Email: info@envirocarebd.com

5

Environmental Baseline Monitoring Report



Ref: ECIL/2024/148-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near Mosque in Aftabnagar
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	L _{max}	L _{min}	Leq	L _{max}	L _{min}	
ANLM-6 Near Mosque in Aftabnagar	58.35	89.3	46.4	45.39	80.4	36.2	Mixed
Bangladesh Standard							Day Time
Industrial area							75
Commercial							70
Mixed area							60
Residential area							55
Silent Area							50
World Bank / IFC Standard							Day Time
Industrial area							70
Residential, Institutional, Educational							55



Prepared By
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 B.Sc. in Environmental Science (KU)
 Consultant (Environment) & Lab-in-charge

Reviewed By
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 B.Sc. in ESRM (MBSTU)
 MSc in Environmental Science (MBSTU)
 Technical Manager

Approved By
 Shorov Roy
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 Quality Manager

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

6

Environmental Baseline Monitoring Report



Ref: ECIL/2024/148-03/ANLM

Test Results of Noise Level Analysis

Name of Project : Dhaka and Western Zone Transmission Grid Expansion Project [Package 2]
Description of Sample : Near Hospital in Aftabnagar
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.02.2024
Date of Analysis : 20.02.2024-14.03.2024
Reporting Date : 18.03.2024

Sampling Location

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

Test Result

Location	Concentration Present (dBA)						Category
	Day			Night			
	Leq	Lmax	Lmin	Leq	Lmax	Lmin	
ANLM-7 Near Hospital in Aftabnagar	47.56	72.6	40.9	38.25	62.5	32.8	Silent
Bangladesh Standard							Day Time Night Time
Industrial area							75 70
Commercial							70 60
Mixed area							60 50
Residential area							55 45
Silent Area							50 40
World Bank / IFC Standard							Day Time Night Time
Industrial area							70 70
Residential, Institutional, Educational							55 45



Prepared By
 Md. Shamim Biswas
 B.Sc. in Environmental Science (KU)
 Consultant (Environment) & Lab-in-charge

Reviewed By
 Sanjoy Kumar Mondol
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 Technical Manager

Approved By
 Shorov Roy
 B.Sc. in ESRM (MBSTU)
 MS in Environmental Science (BAU)
 Quality Manager

Address: House #9 (3rd Flr), Road # 6, Sector # 12, Uttara, Dhaka-1230, Bangladesh. Cell: 01925687029,
 Phone: +88 0255087283, Web: www.envirocarebd.com, Email: info@envirocarebd.com

7

	Government of the People's Republic of Bangladesh Office of the Chief Chemist Department of Public Health Engineering Central Lab, 38-39, Mohakhali C/A, Dhaka-1212 Phone: 88-02-9881927, Fax: 88-02-9882003, Email: wqmsc_central_lab@yahoo.com	
Lab Memo: 998/ CC, DPHE, CL, Dhaka		Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

Sample ID: CEN2024030148	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nil & Dated: 20-02-2024	Sample Source: Surface Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : SW-1)	Union:, Vill.: Lake side, Bashundhara I Block
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.30	mg/L	UVS	0.10
2	Biochemical Oxygen Demand (BOD)	0.2	29	mg/L	5 days incubation	0.1
3	Chemical Oxygen Demand (COD)	4.0	124	mg/L	CRM	4.0
4	Coliform (Total)	0	96	N/100ml	MFM	-
5	Dissolved Oxygen (DO)	6.0	3.16	mg/L	Multimeter	-
6	pH	6.5-8.5	7.0	-	pH Meter	-
7	Total Dissolved Solid (TDS)	1000	445	mg/L	Multimeter	-
8	Total Suspended Solid (TSS)	10	6	mg/L	Gravimetric Method	-
9	Turbidity	10	18.7	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by:		Countersigned/Approved by:	
	Signature		Signature
1.) Name: Md. Saiful Alam Khosru		1.) Name: Mita Sarker	
Designation: Sample Analyzer	18.03.2024	Designation: Senior Chemist	18/03/2024
2.) Name: Taslima Akhter		2.) Name: Md. Biplab Hossain	
Designation: Sample Analyzer	18.03.2024	Designation: Chief Chemist	Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka

	Government of the People's Republic of Bangladesh Office of the Chief Chemist Department of Public Health Engineering Central Lab, 38-39, Mohakhali C/A, Dhaka-1212 Phone: 88-02-9881927, Fax: 88-02-9882003, Email: wqmsc_central_lab@yahoo.com	
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Lab Memo: 998/ CC, DPHE, CL, Dhaka

Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

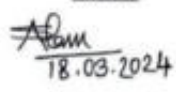
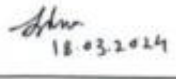
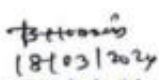
Sample ID: CEN2024030149	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nill & Dated: 20-02-2024	Sample Source: Surface Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : SW-2)	Union:, Vill.: Canal, Near UIU
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.26	mg/L	UVS	0.10
2	Biochemical Oxygen Demand (BOD)	0.2	32	mg/L	5 days incubation	0.1
3	Chemical Oxygen Demand (COD)	4.0	144	mg/L	CRM	4.0
4	Coliform (Total)	0	48	N/100ml	MFM	-
5	Dissolved Oxygen (DO)	6.0	2.80	mg/L	Multimeter	-
6	pH	6.5-8.5	7.1	-	pH Meter	-
7	Total Dissolved Solid (TDS)	1000	370	mg/L	Multimeter	-
8	Total Suspended Solid (TSS)	10	7	mg/L	Gravimetric Method	-
9	Turbidity	10	23.5	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: 1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer  18.03.2024 2.) Name: Taslima Akhter Designation: Sample Analyzer  18.03.2024	Countersigned/Approved by: 1.) Name: Mita Sarker Designation: Senior Chemist  18.03.2024 2.) Name: Md. Biplob Hossain Designation: Chief Chemist  Md. Biplob Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka
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	Government of the People's Republic of Bangladesh Office of the Chief Chemist Department of Public Health Engineering Central Lab, 38-39, Mohakhali C/A, Dhaka-1212 Phone: 88-02-9881927, Fax: 88-02-9852003, Email: wqmsc_central_lab@yahoo.com	
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Lab Memo: 998/ CC, DPHE, CL, Dhaka

Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

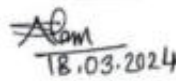
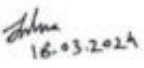
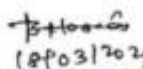
Sample ID: CEN2024030150	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nill & Dated: 20-02-2024	Sample Source: Surface Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : SW-3)	Union:, Vill.: Canal, Near Aftabnagar Steel Bridge
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Ammonia	0.5	0.32	mg/L	UVS	0.10
2	Biochemical Oxygen Demand (BOD)	0.2	40	mg/L	5 days incubation	0.1
3	Chemical Oxygen Demand (COD)	4.0	176	mg/L	CRM	4.0
4	Coliform (Total)	0	64	N/100ml	MFM	-
5	Dissolved Oxygen (DO)	6.0	2.45	mg/L	Multimeter	-
6	pH	6.5-8.5	7.1	-	pH Meter	-
7	Total Dissolved Solid (TDS)	1000	476	mg/L	Multimeter	-
8	Total Suspended Solid (TSS)	10	4	mg/L	Gravimetric Method	-
9	Turbidity	10	10.8	NTU	Turbidity Meter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: 1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer  18.03.2024 2.) Name: Taslima Akhter Designation: Sample Analyzer  16.03.2024	Countersigned/Approved by: 1.) Name: Mita Sarker Designation: Senior Chemist  18.03.2024 2.) Name: Md. Biplab Hossain Designation: Chief Chemist  18.03.2024 Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka
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Email: info.beetlsl@gmail.com



Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

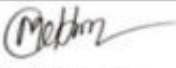
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Description of sample	: Canal Water
Sample ID	: SW-01
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 19 February, 2024
GPS Location	: 23.81481N; 90.43594E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration	ECR*2023 Standard*
			SW 01	
Oil and Grease	mg/l	APHA 23RD EDN. 2017 (5520- B)	2.7	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

*NYS- Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
13.03.2024	13.03.2024	13.03.2024



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Email: info.beetlsl@gmail.com



Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

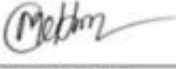
Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Description of sample	: Canal Water
Sample ID	: SW-01
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 19 February, 2024
GPS Location	: 23.81481N; 90.43594E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration	ECR*2023 Standard*
			SW 01	
Oil and Grease	mg/l	APHA 23RD EDN. 2017 (5520- B)	2.7	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

*NYS- Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
13.03.2024	13.03.2024	13.03.2024



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Email: info.beetlsl@gmail.com



Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

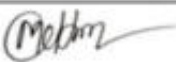
Name of Project	: Dhaka and Western Zone Transmission Grid Expansion Project
Description of sample	: Canal Water
Sample ID	: SW-02
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 19 February, 2024
GPS Location	: 23.80095N; 90.44898E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration	ECR*2023 Standard*
			SW 02	
Oil and Grease	mg/l	APHA 23RD EDN. 2017 (5520- B)	3.1	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

*NYS- Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
13.03.2024	13.03.2024	13.03.2024



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Email: info.beetlsl@gmail.com



Customer/Accounts/Office Copy

Physical/ Chemical/ Bacteriological Analysis of Water Sample

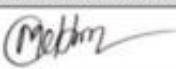
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Description of sample	: Canal Water
Sample ID	: SW-03
Location	: Dhaka
Sample Collector	: Collected by EnviroCare Technical Team
Analyzed By	: BEETLSL Laboratory
Sample Collection Date	: 19 February, 2024
GPS Location	: 23.76581N; 90.43807E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration	ECR'2023 Standard*
			SW 03	
Oil and Grease	mg/l	APHA 23RD EDN. 2017 (5520- B)	2.9	NYS

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

*NYS- Not Yet Set

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
13.03.2024	13.03.2024	13.03.2024

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Lab Memo: 998/ CC, DPHE, CL, Dhaka

Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

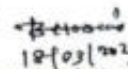
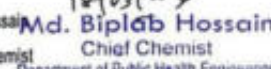
Sample ID: CEN2024030151	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nil & Dated: 20-02-2024	Sample Source: Ground Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : GW-1)	Union:, Vill.: Near Bashundhara R/A
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	45	mg/L	Titrimetric	-
3	Coliform (Faecal)	0	0	N/100ml	MFM	-
4	Coliform (Total)	0	0	N/100ml	MFM	-
5	Iron (Fe)	0.3-1	0.30	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.8	-	pH Meter	-
8	Salinity	-	0.21	‰	Multimeter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: 1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer  18.03.2024 2.) Name: Taslima Akhter Designation: Sample Analyzer  16.03.2024	Countersigned/Approved by: 1.) Name: Mita Sarker Designation: Senior Chemist  18.03.2024 2.) Name: Md. Biplab Hossain Designation: Chief Chemist  Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka
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Lab Memo: 998/ CC, DPHE, CL, Dhaka

Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

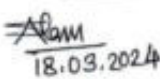
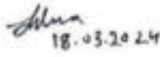
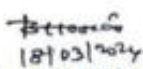
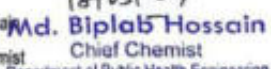
Sample ID: CEN2024030152	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nil & Dated: 20-02-2024	Sample Source: Ground Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : GW-2)	Union:, Vill.: Mosque, Near UIU
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.001	mg/L	AAS	0.001
2	Chloride	150-600	40	mg/L	Titrimetric	-
3	Coliform (Faecal)	0	0	N/100ml	MFM	-
4	Coliform (Total)	0	0	N/100ml	MFM	-
5	Iron (Fe)	0.3-1	0.06	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.7	-	pH Meter	-
8	Salinity	-	0.15	‰	Multimeter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: 1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer  18.03.2024 2.) Name: Taslima Akhter Designation: Sample Analyzer  18.03.2024	Countersigned/Approved by: 1.) Name: Mita Sarker Designation: Senior Chemist  18.03.2024 2.) Name: Md. Biplab Hossain Designation: Chief Chemist  18.03.2024 Md. Biplab Hossain Chief Chemist Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka
---	--

	Government of the People's Republic of Bangladesh Office of the Chief Chemist Department of Public Health Engineering Central Lab, 38-39, Mohakhali C/A, Dhaka-1212 Phone: 88-02-9881927, Fax: 88-02-9882003, Email: wqmsc_central_lab@yahoo.com	
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Lab Memo: 998/ CC, DPHE, CL, Dhaka

Date: 18-03-2024

Physical /Chemical/ Bacteriological Analysis of Water Sample

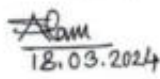
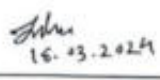
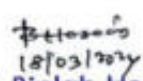
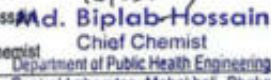
Sample ID: CEN2024030153	Sample Receiving date: 20-02-2024
Ref. Memo No: ECIL/2024/Nil & Dated: 20-02-2024	Sample Source: Ground Water
Sent by: Md. Shamim Biswas, Consultant (Environment), Envirocare International Ltd., Uttara, Dhaka.	Dist: Dhaka, Upa:
Care Taker: Envirocare International Ltd. (Sample : GW-3)	Union:, Vill.: Mosque, Near Aftabnagar
Sample Collection date: 19-02-2024	Date of Testing: 20/02/2024-14/03/2024

LABORATORY TEST RESULTS:

Sl.#	Water quality parameters	Bangladesh Standard	Concentration present	Unit	Analysis Method	LOQ
1	Arsenic (As)	0.05	0.002	mg/L	AAS	0.001
2	Chloride	150-600	20	mg/L	Titrimetric	-
3	Coliform (Faecal)	0	0	N/100ml	MFM	-
4	Coliform (Total)	0	0	N/100ml	MFM	-
5	Iron (Fe)	0.3-1	0.07	mg/L	AAS	0.05
6	Manganese (Mn)	0.1	0.03	mg/L	AAS	0.03
7	pH	6.5-8.5	7.7	-	pH Meter	-
8	Salinity	-	0.13	‰	Multimeter	-

Comments: Sample was collected & supplied by client.

N.B: AAS - Atomic Absorption Spectrophotometer, UVS - UV-Visible Spectrophotometer, MFM-Membrane Filtration Method, CRM-Closed Reflex Methods, LOQ - Limit of Quantitation.

Test Performed by: 1.) Name: Md. Saiful Alam Khosru Designation: Sample Analyzer Signature:  18.03.2024 2.) Name: Taslima Akhter Designation: Sample Analyzer Signature:  16.03.2024	Countersigned/Approved by: 1.) Name: Mita Sarker Designation: Senior Chemist Signature:  18/03/2024 2.) Name: Md. Biplab Hossain Designation: Chief Chemist Signature:  18/03/2024 Department of Public Health Engineering Central Laboratory Mohakhali, Dhaka
---	--

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

To
 Mr. Md. Shamim Biswas
 Consultant (Environment) & Lab-in-charge
 Envirocare International Ltd.
 Rose Garden, 3rd Floor
 House # 09, Road # 06
 Sector # 12, Uttara, Dhaka.

Analytical Result of Supplied Soil Sample

Sl. No.	Lab No.	Code No.	Name of the Element					
			pH	Organic Carbon (OC)	Copper (Cu) Available	Lead (Pb)	Cadmium (Cd) Total	Chromium (Cr)
1.	7989	SQ-1	8.4	0.46	0.53	7.03	0.18	13.15

M. Masuda Begum
 22/08/28
 (Dr. Masuda Begum)
 Senior Scientific Officer
 Phone: 02-41025066.

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

To
 Mr. Md. Shamim Biswas
 Consultant (Environment) & Lab-in-charge
 Envirocare International Ltd.
 Rose Garden, 3rd Floor
 House # 09, Road # 06
 Sector # 12, Uttara, Dhaka.

Analytical Result of Supplied Soil Sample

Sl. No.	Lab No.	Code No.	Name of the Element					
			pH	Organic Carbon (OC)	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)
					Available	Total		
					(%)	(ppm)		
1.	7990	SQ-2	7.7	1.45	1.18	8.13	0.26	14.81


 22/04/24
 (Dr. Masuda Begum)
 Senior Scientific Officer
 Phone: 02-41025066.

Government of the People's Republic of Bangladesh
 Ministry of Agriculture
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 Krishi Khamar Sarak, Dhaka-1215

To
 Mr. Md. Shamim Biswas
 Consultant (Environment) & Lab-in-charge
 Envirocare International Ltd.
 Rose Garden, 3rd Floor
 House # 09, Road # 06
 Sector # 12, Uttara, Dhaka.

Analytical Result of Supplied Soil Sample

Sl. No.	Lab No.	Code No.	Name of the Element					
			pH	Organic Carbon (OC)	Copper (Cu)	Lead (Pb)	Cadmium (Cd)	Chromium (Cr)
					Available	Total		
					(%)	(ppm)		
1.	7991	SQ-3	7.8	0.89	1.13	9.45	0.10	14.81

Masuda Begum
 22/04/24
 (Dr. Masuda Begum)
 Senior Scientific Officer
 Phone: 02-41025066.

Appendix C-2: 400/230 kV GIS Substation at Kaliganj, Gazipur




Ref: ECIL/2023/419-09/AAQ

Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area (In front of Hafej Sheikh's House)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 27.09.2023
Date of Analysis : 28.09.2023-05.10.2023
Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{1.4}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
1	KAAQ1 In front of Hafej Sheikh's House	23	58	91	4.9	5.1	0.46	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL – Bellow of detection level



[Signature]

Prepared By
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Consultant (Environment) & Lab-in-charge

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Reviewed By
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Approved By
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1



Ref: ECIL/2023/420-09/AAQ

Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area (Beside Kaliganj-Kapasias Rd. located near Nohir Bridge)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 20.09.2023
Date of Analysis : 21.09.2023-27.09.2023
Reporting Date : 30.09.2023

SL No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
2	KAAQ2 Beside Kaliganj-Kapasias Rd. located near Nohir Bridge	27	63	95	5.3	6.0	0.51	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephelometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Below of detection level



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Ref: ECIL/2023/421-09/AAQ

Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area (In front of Mamun Mia's House)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 30.09.2023
Date of Analysis : 01.10.2023-05.10.2023
Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
3	KAAQ3 In front of Mamun Mia's House	29	65	101	6.2	5.7	0.63	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Bellow of detection level



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Ref: ECIL/2023/422-09/AAQ

Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area In front of Late Abdul Razzak's House
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 30.09.2023
Date of Analysis : 01.10.2023-05.10.2023
Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
4	KAAQ4 In front of Late Abdul Razzak's House	32	68	106	6.8	6.3	0.59	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Bellow of detection level



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Ref: ECH/2023/419-09/NLI

Test Results of Noise Level Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area (In front of Hafej Sheikh's House)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 20.09.2023
Date of Analysis : 21.09.2023-27.09.2023
Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
1	In front of Hafej Sheikh's House 23.968853 N & 90.549165 E	KANM-1

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
KANM-1 In front of Hafej Sheikh's House	48.9	55.3	36.1	38.3	41.3	35.3	Residential	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Institutional; Educational							55	45



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Ref: ECIL/2023/420-09/NLI

Test Results of Noise Level Analysis

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

Description of Sample : Sample was collected from project area (Beside Kaliganj-Kapasias Rd. located near Nohir Bridge)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 20.09.2023

Date of Analysis : 21.09.2023-27.09.2023

Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
2	Beside Kaliganj-Kapasias Rd. located near Nohir Bridge 23.963585 N & 90.549122 E	KANM-2

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
KANM-2 Beside Kaliganj-Kapasias Rd. located near Nohir Bridge	50.71	61.9	34.7	40.88	49.1	33.8	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Institutional; Educational							55	45



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Ref: ECIL/2023/421-09/NLI

Test Results of Noise Level Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of Sample : Sample was collected from project area (In front of Mamun Mia's House)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 20.09.2023
Date of Analysis : 21.09.2023-27.09.2023
Reporting Date : 30.09.2023

Sampling Location:

SL No	Sample Locations	Sampling ID
3	In front of Mamun Mia's House 23.965680 N & 90.554108 E	KANM-3

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
KANM-3 In front of Mamun Mia's House	48.7	55.1	35.9	35.6	38.6	32.6	Residential	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intitutional; Educational							55	45



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Ref: ECIL/2023/422-09/NLI

Test Results of Noise Level Analysis

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

Description of Sample : Sample was collected from project area (In front of Late Abdul Razzak's House)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 20.09.2023

Date of Analysis : 21.09.2023-27.09.2023

Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
4	In front of Late Abdul Razzak's House 23.969766 N & 90.552512 E	KANM-4

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
KANM-4 In front of Late Abdul Razzak's House	47.3	53.8	34.5	38.9	42.0	36.0	Residential	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45



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Customer/Accounts/Office Copy

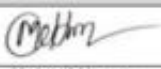
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-01
Location	: Nohir Khali, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.966951 N; 90.552715 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 01	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.24	-	-	-	-	-	-
BOD ₅	mg/l	6	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	17	10	10	25	50	100	100
DO	mg/l	5.48	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.41	-	-	-	-	-	-
pH	--	7.1	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	54	1000	1000	1000	1000	1000	1000
Total Coliform		17	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	4	-	-	-	-	-	-
Turbidity	NTU	11.2	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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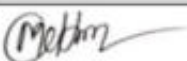
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-02
Location	: Nollir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.965599 N; 90.551005 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 02	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.21	-	-	-	-	-	-
BOD ₅	mg/l	6	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	19	10	10	25	50	100	100
DO	mg/l	5.52	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.39	-	-	-	-	-	-
pH	--	7.1	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	51	1000	1000	1000	1000	1000	1000
Total Coliform		15	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	3	-	-	-	-	-	-
Turbidity	NTU	10.8	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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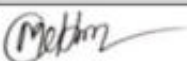
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-03
Location	: Nollir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.966207 N; 90.549402 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 03	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.21	-	-	-	-	-	-
BOD ₅	mg/l	7	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	16	10	10	25	50	100	100
DO	mg/l	5.5	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.44	-	-	-	-	-	-
pH	--	7.3	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	49	1000	1000	1000	1000	1000	1000
Total Coliform		15	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	5	-	-	-	-	-	-
Turbidity	NTU	11.1	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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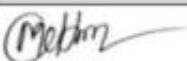
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Surface water Sample collection
Sample ID	: KSWQ-04
Location	: Nollir Khal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.966470 N; 90.548220 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		KSWQ 04	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.22	-	-	-	-	-	-
BOD ₅	mg/l	5	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	18	10	10	25	50	100	100
DO	mg/l	5.6	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.43	-	-	-	-	-	-
pH	--	7.1	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	47	1000	1000	1000	1000	1000	1000
Total Coliform		14	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	4	-	-	-	-	-	-
Turbidity	NTU	10.3	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

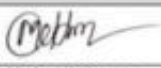
Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-01
Location	: Hafej Sheikh's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.968512 N; 90.548888 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-01	
Arsenic	mg/l	AAS	0.002	0.05
Cl ⁻	mg/l	Titrimetric	21	250*
EC	μS/cm	Multimeter	231	-
Fe	mg/l	AAS	1.3	0.3-1
Mn	mg/l	AAS	0.02	0.4
pH	-	pH Meter	7.1	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.04	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-02
Location	: Beside Kaliganj-Kapasias Rd. located near Nohir Bridge, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.963364 N; 90.548810 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-02	
Arsenic	mg/l	AAS	0.002	0.05
Cl ⁻	mg/l	Titrimetric	19	250*
EC	μS/cm	Multimeter	257	-
Fe	mg/l	AAS	1.1	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.3	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.02	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

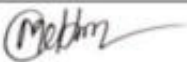
Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-03
Location	: Mamun Mia's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.965455 N; 90.554317 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-03	
Arsenic	mg/l	AAS	0.001	0.05
Cl ⁻	mg/l	Titrimetric	19	250*
EC	μS/cm	Multimeter	234	-
Fe	mg/l	AAS	1.1	0.3-1
Mn	mg/l	AAS	0.02	0.4
pH	-	pH Meter	7.3	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.03	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

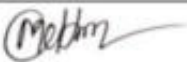
Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Groundwater Sample collection
Sample ID	: KGWQ-04
Location	: Late Abdul Razzak's House, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.969981 N; 90.553189 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			KGWQ-04	
Arsenic	mg/l	AAS	0.001	0.05
Cl ⁻	mg/l	Titrimetric	20	250*
EC	μS/cm	Multimeter	237	-
Fe	mg/l	AAS	1.2	0.3-1
Mn	mg/l	AAS	0.02	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.03	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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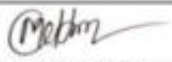
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-01
Location	: Beside Hafej Sheikh's House, Boktarpur, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.968768 N; 90.549979 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-1	
1.	Cadmium (Cd)	PPM	0.68	0.8
2.	Chromium (Cr)	PPM	39.32	100
3.	Copper (Cu)	PPM	2.71	36
4.	Lead (Pb)	PPM	6.12	85
5.	Organic Content	%	7.43	-
6.	pH	-	6.1	-
7.	Texture	mm	0.048	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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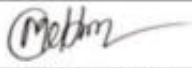
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-02
Location	: Beside Nollir Bridge, Boktarpur, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.966955 N; 90.549420 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-2	
1.	Cadmium (Cd)	PPM	0.83	0.8
2.	Chromium (Cr)	PPM	41.23	100
3.	Copper (Cu)	PPM	3.07	36
4.	Lead (Pb)	PPM	9.12	85
5.	Organic Content	%	6.21	-
6.	pH	-	5.9	-
7.	Texture	mm	0.056	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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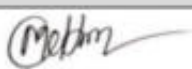
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-03
Location	: Beside the bridge of Mohani fuldi Rd
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.967744 N; 90.553671 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-1	
1.	Cadmium (Cd)	PPM	0.57	0.8
2.	Chromium (Cr)	PPM	27.12	100
3.	Copper (Cu)	PPM	2.74	36
4.	Lead (Pb)	PPM	5.23	85
5.	Organic Content	%	12.28	-
6.	pH	-	6.6	-
7.	Texture	mm	0.021	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
 Mahadi Hasan Executive (Environmental Lab), BEETLSL	 Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	 Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230 KV GIS Substation at Kaliganj on turnkey basis (Package-5)
Description of sample	: Soil Sample collection
Sample ID	: KSQ-04
Location	: Beside Late Abdul Razzak's House, Boktarpur, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 20 September, 2023
GPS Location	: 23.969622 N; 90.552497 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			KSQ-4	
1.	Cadmium (Cd)	PPM	0.76	0.8
2.	Chromium (Cr)	PPM	49.32	100
3.	Copper (Cu)	PPM	2.93	36
4.	Lead (Pb)	PPM	7.13	85
5.	Organic Content	%	10.43	-
6.	pH	-	5.9	-
7.	Texture	mm	0.034	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023

Appendix C-3: 400/230/132 KV GIS Substation at Purbachal,



Ref: ECIL/2023/415-09/AAQ

Test Results of Ambient Air Quality Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of Sample : Sample was collected from project area (In front of Dulal Mia's house)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 26.09.2023
Date of Analysis : 27.09.2023-05.10.2023
Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
1	PAAQI In front of Dulal Mia's house	32	70	107	6.7	7.2	0.59	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL – Bellow of detection level



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 Technical Manager

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 Quality Manager

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Ref: ECIL/2023/416-09/AAQ

Test Results of Ambient Air Quality Analysis

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

Description of Sample : Sample was collected from project area (In front of Dipak Chakraborty's Shop)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 26.09.2023

Date of Analysis : 27.09.2023-05.10.2023

Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
2	PAAQ2 In front of Dipak Chakraborty's Shop	31	68	103	5.9	6.3	0.48	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Bellow of detection level



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1



Ref: ECIL/2023/417-09/AAQ

Test Results of Ambient Air Quality Analysis

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

Description of Sample : Sample was collected from project area (In front of Boro Kau Shree Shree Sarbojonin Durga Mondir)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 19.09.2023

Date of Analysis : 21.09.2023-27.09.2023

Reporting Date : 30.09.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
3	PAAQ3 In front of Boro Kau Shree Shree Sarbojonin Durga Mondir	29	66	98	5.4	6.7	0.51	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Bellow of detection level



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Ref: ECIL/2023/417-09/AAQ

Test Results of Ambient Air Quality Analysis

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

Description of Sample : Sample was collected from project area (In front of Mohadev Karmakar's house)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 27.09.2023

Date of Analysis : 30.09.2023-05.10.2023

Reporting Date : 07.10.2023

Sl. No.	Sample Locations	Concentration present different parameter in ambient air						
		PM _{2.5}	PM ₁₀	SPM	SO ₂	NO ₂	CO	Pb
4	PAAQ4 In front of Mohadev Karmakar's house	28	69	101	6.2	6.6	0.53	BDL
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³
Duration		24	24	8	24	24	8	24
Method of Analysis		Nephotometer			Electro-Chemical Sensor	Electro-Chemical Sensor	Electro-Chemical Sensor	AAS
Bangladesh Standard		65	150	200	80	80	5	0.5

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

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

Note: BDL = Bellow of detection level



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Ref: ECIL/2023/415-09/NLI

Test Results of Noise Level Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of Sample : Sample was collected from project area (In front of Dulal Mia's house)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.09.2023
Date of Analysis : 21.09.2023-27.09.2023
Reporting Date : 30.09.2023

Sampling Location:

SL No	Sample Locations	Sampling ID
1	In front of Dulal Mia's house 23.864745 N & 90.475689 E	PANM-I

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	Lmax	Lmin	Leq	Lmax	Lmin		
PANM-I In front of Dulal Mia's house	53.52	61.8	36.6	39.95	49.1	33.4	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Institutional; Educational							55	45



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Ref: ECIL/2023/416-09/NLI

Test Results of Noise Level Analysis

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

Description of Sample : Sample was collected from project area (In front of Dipak Chakraborty's Shop)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 19.09.2023

Date of Analysis : 21.09.2023-27.09.2023

Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
2	In front of Dipak Chakraborty's Shop 23.865882 N & 90.475720 E	PANM-2

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	Leq	Lmax	Lmin	Leq	Lmax	Lmin		
PANM-2 In front of Dipak Chakraborty's Shop	51.39	60.7	35.6	41.66	48.9	32.8	Mixed	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitional; Educational							55	45



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Ref: ECIL/2023/417-09/NLI

Test Results of Noise Level Analysis

Name of Project : Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of Sample : Sample was collected from project area (In front of Badal Mia's house)
Sample Collector : Collected by EnviroCare Technical Team
Sample Date : 19.09.2023
Date of Analysis : 21.09.2023-27.09.2023
Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
3	In front of Badal Mia's house 23.861849 N & 90.476507 E	PANM-3

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
PANM-3 In front of Badal Mia's house	49.47	62.8	36.8	38.71	46.3	31.9	Residential	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intuitiontal; Educational							55	45



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Ref: ECIL/2023/418-09/NLI

Test Results of Noise Level Analysis

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

Description of Sample : Sample was collected from project area (In front of Mohadev Karmakar's House)

Sample Collector : Collected by EnviroCare Technical Team

Sample Date : 19.09.2023

Date of Analysis : 21.09.2023-27.09.2023

Reporting Date : 30.09.2023

Sampling Location:

Sl. No	Sample Locations	Sampling ID
4	In front of Dulal Mia's house 23.867743 N & 90.476149 E	PANM-4

Test Results:

Location	Concentration Present (dBA)						Category	
	Day			Night				
	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}	L _{min}		
PANM-4 In front of Mohadev Karmakar's House	50.54	60.5	39.4	39.92	63.1	33.7	Residential	
Bangladesh Standard							Day Time	Night Time
Industrial area							75	70
Commercial							70	60
Mixed area							60	50
Residential area							55	45
Silent Area							50	40
World Bank / IFC Standard								
Industrial area							70	70
Residential; Intitutional; Educational							55	45



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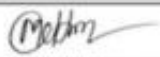
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: PSWQ-01
Location	: Khal Beside Dulal Mia's Shop, Pubachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.864318 N; 90.475926 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		PSWQ 01	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.24	-	-	-	-	-	-
BOD ₅	mg/l	8	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	19	10	10	25	50	100	100
DO	mg/l	5.21	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.49	-	-	-	-	-	-
pH	-	7.2	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	61	1000	1000	1000	1000	1000	1000
Total Coliform		21	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	4	-	-	-	-	-	-
Turbidity	NTU	12.3	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
25.09.2023	25.09.2023	25.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: PSWQ-02
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.863404 N; 90.474864 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		PSWQ 02	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.31	-	-	-	-	-	-
BOD ₅	mg/l	9	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	23	10	10	25	50	100	100
DO	mg/l	5.11	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.53	-	-	-	-	-	-
pH	--	6.9	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	67	1000	1000	1000	1000	1000	1000
Total Coliform		27	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	7	-	-	-	-	-	-
Turbidity	NTU	17.1	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
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25.09.2023	25.09.2023	25.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: PSWQ-03
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.862593 N; 90.476197 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		PSWQ 03	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.29	-	-	-	-	-	-
BOD ₅	mg/l	8	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	22	10	10	25	50	100	100
DO	mg/l	5.17	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.5	-	-	-	-	-	-
pH	--	6.9	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	60	1000	1000	1000	1000	1000	1000
Total Coliform		29	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	6	-	-	-	-	-	-
Turbidity	NTU	15.9	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
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25.09.2023	25.09.2023	25.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Surface water Sample collection
Sample ID	: PSWQ-04
Location	: Tongi Khal, Pubachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.862223 N; 90.475782 E

LABORATORY TEST RESULTS:

Parameters	Unit	Concentration Present	ECR, 2023 Standard*					
		PSWQ 04	a	b	c	d	e	f
Ammonia (NH ₃)	mg/l	0.33	-	-	-	-	-	-
BOD ₅	mg/l	10	≤2	≤3	≤3	≤6	12	≤12
COD	mg/l	26	10	10	25	50	100	100
DO	mg/l	5.04	≥6	≥5	≥5	≥5	≥1	-
Total Nitrogen	mg/l	<1.0	-	-	-	-	-	-
Oil & Grease	mg/l	0.61	-	-	-	-	-	-
pH	--	6.9	6.5-8.5	6.5-8.5	6-9	6-9	6.5-8.5	6.5-8.5
TDS	mg/l	69	1000	1000	1000	1000	1000	1000
Total Coliform		31	≤100	≤50	≤5000	≤5000	-	≤50000
TSS	mg/l	9	-	-	-	-	-	-
Turbidity	NTU	19.3	-	-	-	-	-	-

*The Environment Conservation Rules (ECR) 2023, Schedule 2, Standard for Inland Surface Water

Lab Test Performed by	Reviewed and checked by	Approved By
		
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25.09.2023	25.09.2023	25.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

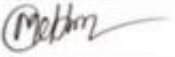
Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: PGWQ-01
Location	: Beside Dulai Mia's Shop, Purbachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.864612 N; 90.475215 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			PGWQ-01	
Arsenic	mg/l	AAS	0.001	0.05
Cl ⁻	mg/l	Titrimetric	17	250*
EC	μS/cm	Multimeter	241	-
Fe	mg/l	AAS	1.2	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.2	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.02	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
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25.09.2023	25.09.2023	25.09.2023



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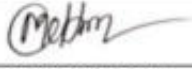
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: PGWQ-02
Location	: Beside Dipak Chakraborty's Shop, Purbachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.866261 N; 90.475607 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			PGWQ-02	
Arsenic	mg/l	AAS	0.001	0.05
Cl ⁻	mg/l	Titrimetric	15	250*
EC	μS/cm	Multimeter	247	-
Fe	mg/l	AAS	1.3	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.1	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.03	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
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Email: info.beetls@gmail.com



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Physical/ Chemical/ Bacteriological Analysis of Water Sample

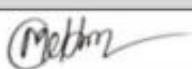
Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: PGWQ-03
Location	: Beside Boro Kau Shree Shree Sarbojonin Durga Mondir, Purbachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.862167 N; 90.477112 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			PGWQ-03	
Arsenic	mg/l	AAS	0.002	0.05
Cl ⁻	mg/l	Titrimetric	18	250*
EC	μS/cm	Multimeter	239	-
Fe	mg/l	AAS	1.1	0.3-1
Mn	mg/l	AAS	0.02	0.4
pH	-	pH Meter	7.4	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.03	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)

N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
25.09.2023	25.09.2023	25.09.2023



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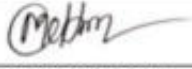
Physical/ Chemical/ Bacteriological Analysis of Water Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Groundwater Sample collection
Sample ID	: PGWQ-04
Location	: Beside Mohadev Karmakar's house, Purbachal, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.868053 N; 90.476480 E

LABORATORY TEST RESULTS:

Parameters	Unit	Method	Concentration Present	ECR'2023 Standard*
			PGWQ-04	
Arsenic	mg/l	AAS	0.001	0.05
Cl ⁻	mg/l	Titrimetric	16	250*
EC	μS/cm	Multimeter	246	-
Fe	mg/l	AAS	1.2	0.3-1
Mn	mg/l	AAS	0.03	0.4
pH	-	pH Meter	7.3	6.5-8.5
Turbidity	NTU	Turbidity Meter	0.03	5

*The Environment Conservation Rules (ECR) 2023, Schedule 2(B)
N.B: AAS- Atomic Absorption Spectrophotometer

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
25.09.2023	25.09.2023	25.09.2023



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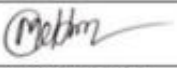
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: PSQ-01
Location	: In front of Dulal Mia's house, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.864784 N; 90.476049 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			PSQ-1	
1.	Cadmium (Cd)	PPM	0.72	0.8
2.	Chromium (Cr)	PPM	46.63	100
3.	Copper (Cu)	PPM	2.54	36
4.	Lead (Pb)	PPM	7.31	85
5.	Organic Content	%	9.47	-
6.	pH	-	6.3	-
7.	Texture	mm	0.043	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
 Mahadi Hasan Executive (Environmental Lab), BEETLSL	 Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	 Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: PSQ-02
Location	: Beside Dipak Chakraborty's Shop, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.865711 N; 90.475979 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			PSQ-2	
1.	Cadmium (Cd)	PPM	0.67	0.8
2.	Chromium (Cr)	PPM	39.63	100
3.	Copper (Cu)	PPM	3.34	36
4.	Lead (Pb)	PPM	5.31	85
5.	Organic Content	%	11.47	-
6.	pH	-	6.1	-
7.	Texture	mm	0.038	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
		
Mahadi Hasan Executive (Environmental Lab), BEETLSL	Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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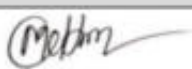
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: PSQ-03
Location	: Beside Athik Bridge, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.863131 N; 90.476066 E

LABORATORY TEST RESULTS:

Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			PSQ-3	
1.	Cadmium (Cd)	PPM	0.81	0.8
2.	Chromium (Cr)	PPM	52.61	100
3.	Copper (Cu)	PPM	3.17	36
4.	Lead (Pb)	PPM	6.21	85
5.	Organic Content	%	8.12	-
6.	pH	-	5.9	-
7.	Texture	mm	0.061	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

Lab Test Performed by	Reviewed and checked by	Approved By
 Mahadi Hasan Executive (Environmental Lab), BEETLSL	 Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	 Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023



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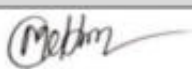
Physical/ Chemical/ Bacteriological Analysis of Soil Sample

Name of Project	: Design, Supply, Installation, Testing and Commissioning of 400/230/132 KV GIS Substation at Purbachal on turnkey basis (Package-6)
Description of sample	: Soil Sample collection
Sample ID	: PSQ-04
Location	: Char located Tongi Khal, Purbachal, Kaliganj, Gazipur
Sample Collector	: Collected by Envirocare Technical Team
Analyzed By	: BEETLSL Laboratory
Monitoring Date	: 19 September, 2023
GPS Location	: 23.863318 N; 90.476336 E

LABORATORY TEST RESULTS:

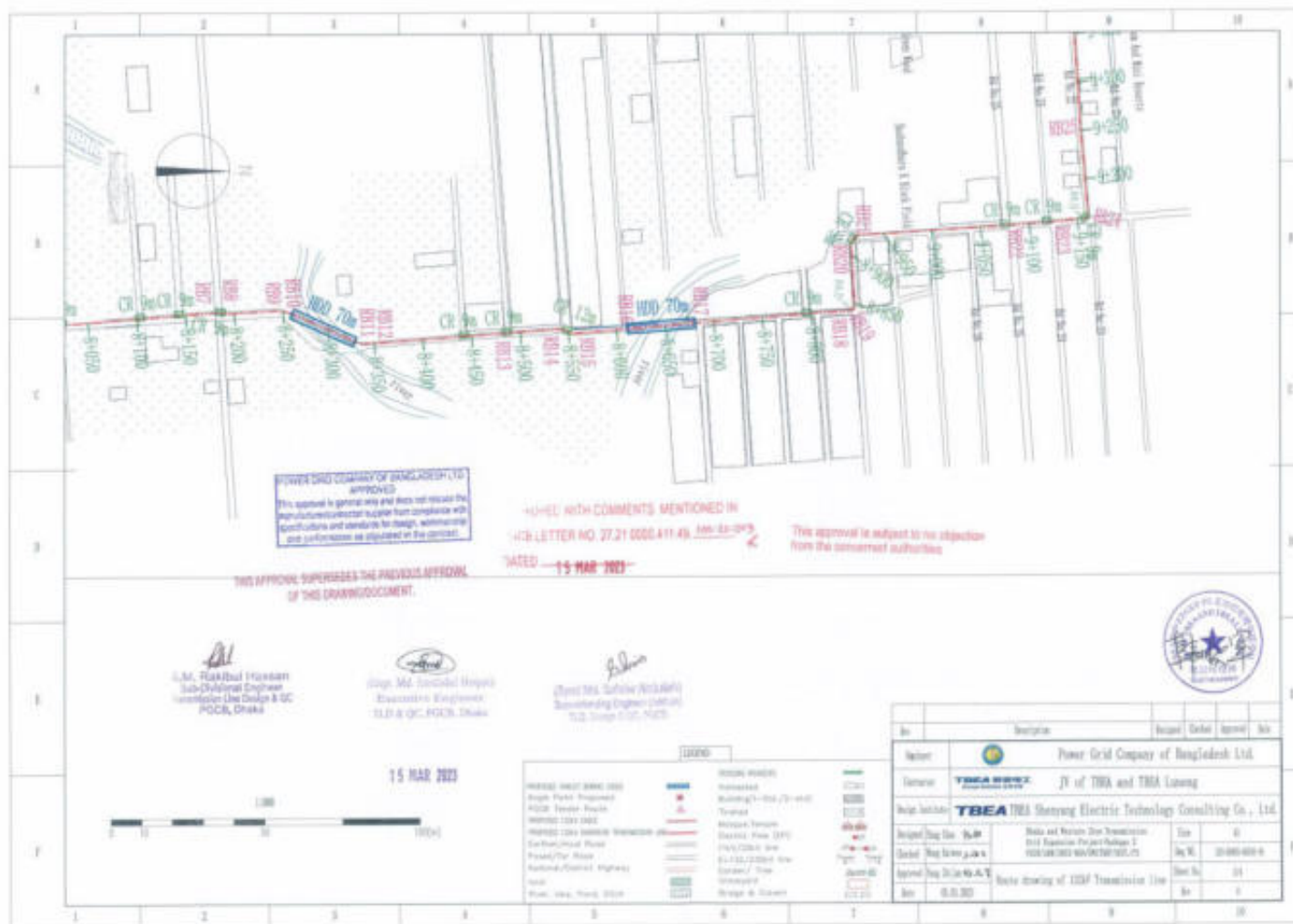
Sl. No.	Parameters	Unit	Concentration Level	* Dutch Standard
			PSQ-4	
1.	Cadmium (Cd)	PPM	0.57	0.8
2.	Chromium (Cr)	PPM	23.14	100
3.	Copper (Cu)	PPM	1.93	36
4.	Lead (Pb)	PPM	4.11	85
5.	Organic Content	%	12.97	-
6.	pH	-	6.7	-
7.	Texture	mm	0.026	-

N.B: The size of sand particles ranges between 2.0 and 0.05 mm; silt, 0.05 mm and 0.002 mm; and clay, less than 0.002 mm.

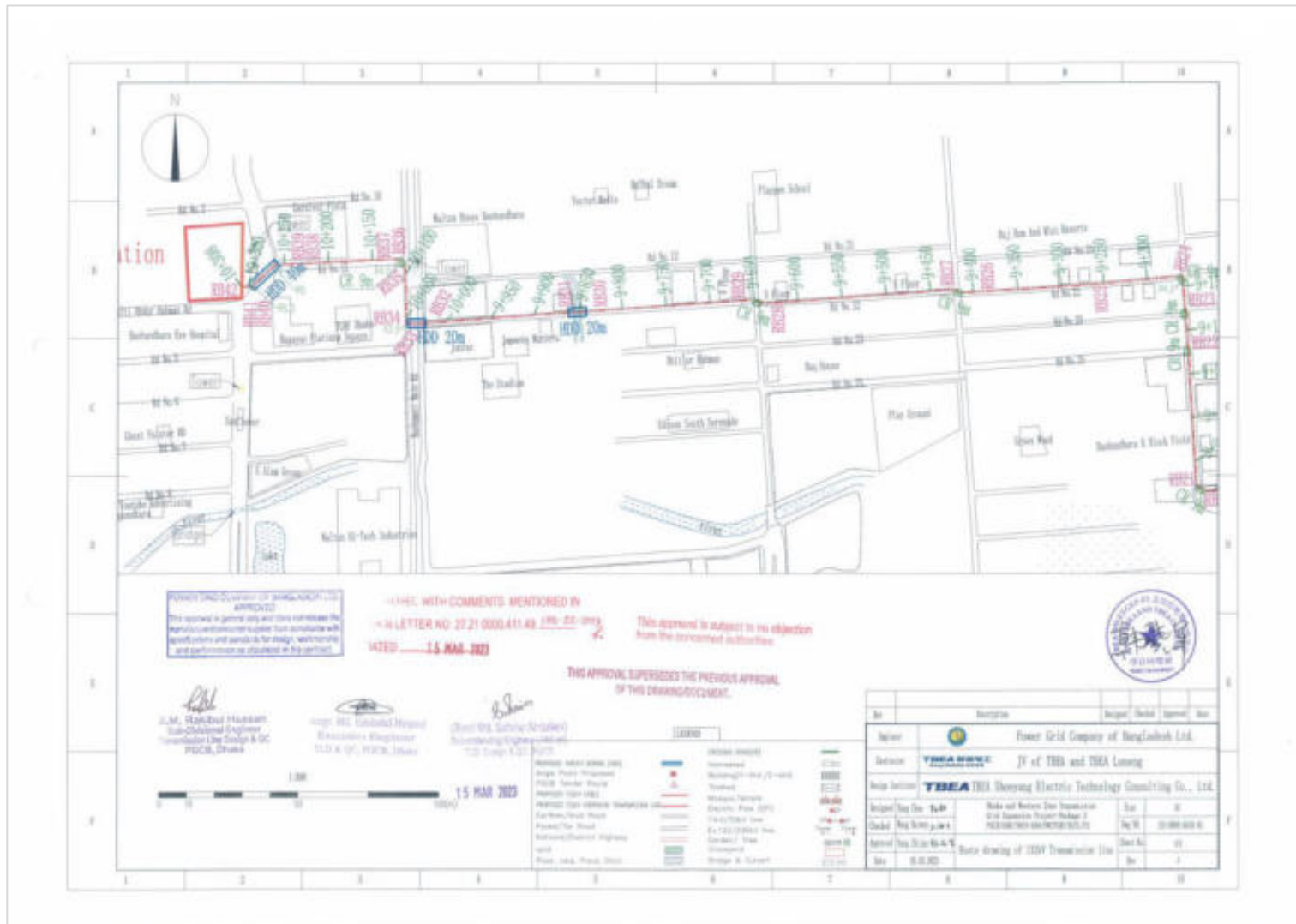
Lab Test Performed by	Reviewed and checked by	Approved By
 Mahadi Hasan Executive (Environmental Lab), BEETLSL	 Md. Nasim Reza Environmental Monitoring Officer (Executive), BEETLSL	 Dr. Fatima Akter Director, BEETLSL
26.09.2023	26.09.2023	26.09.2023

[illegible]

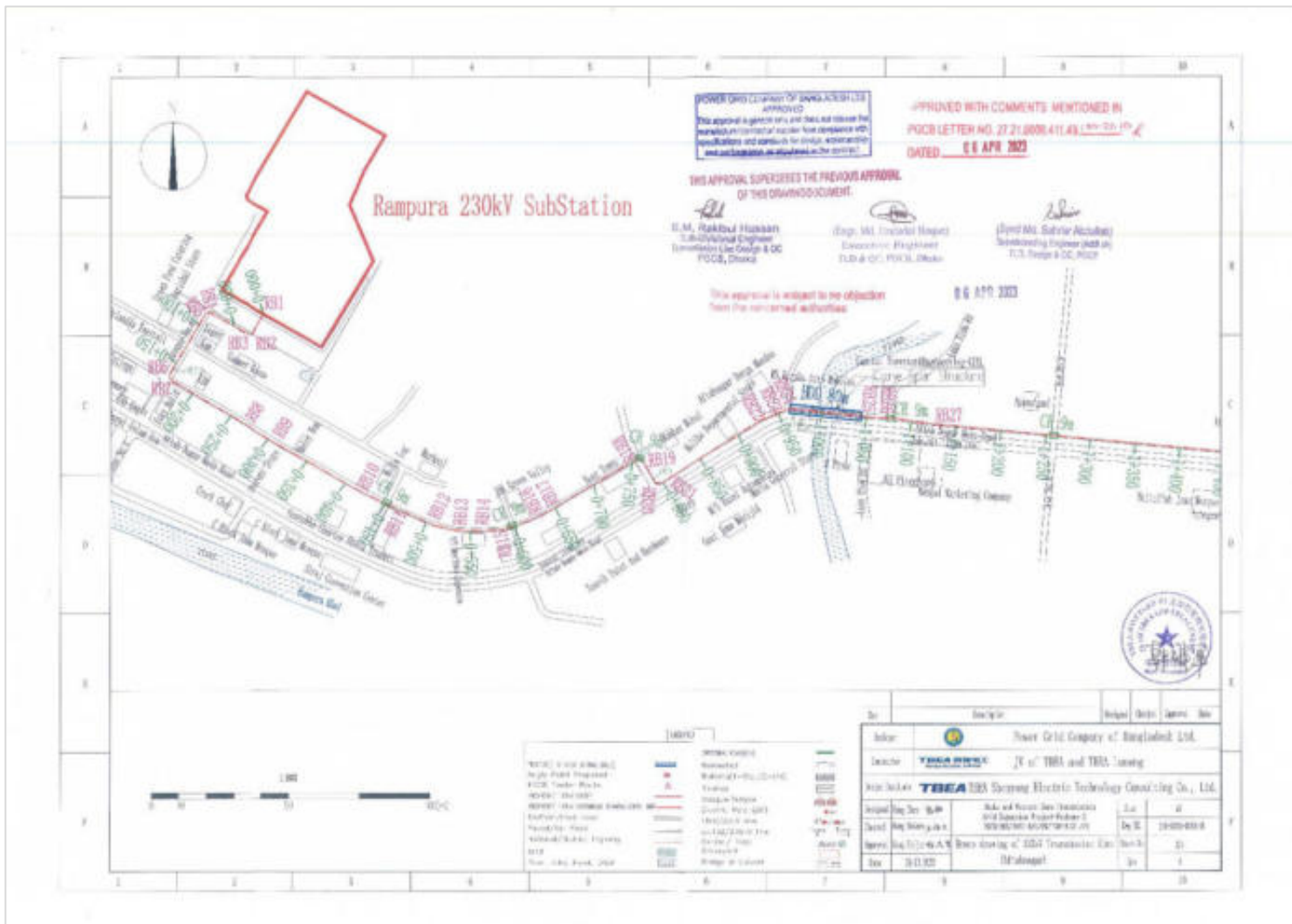
Rampura- Bashundhara 132kV Underground Cable Line (Bashundhara Area)



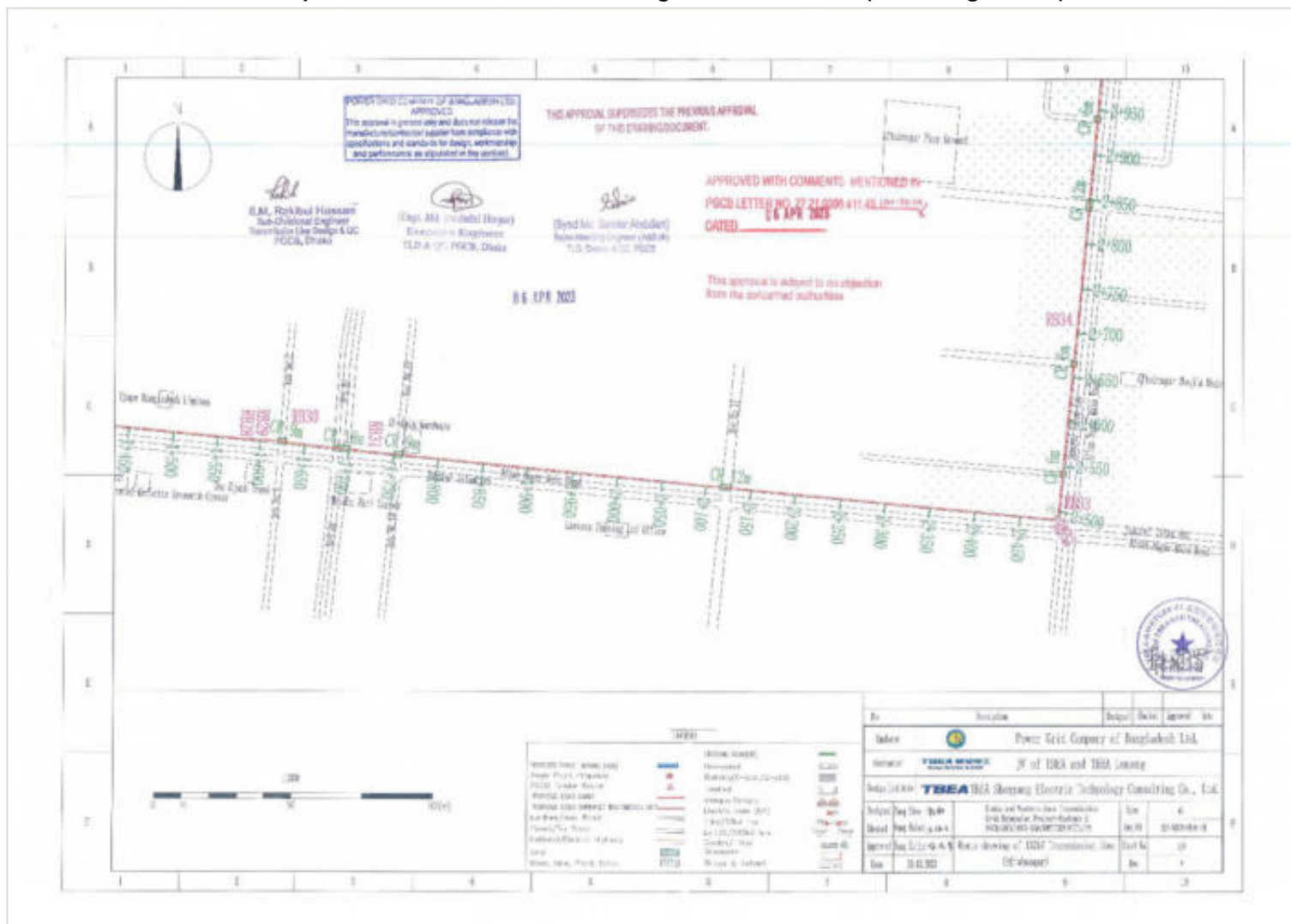
Rampura- Bashundhara 132kV Underground Cable Line (Bashundhara Area)



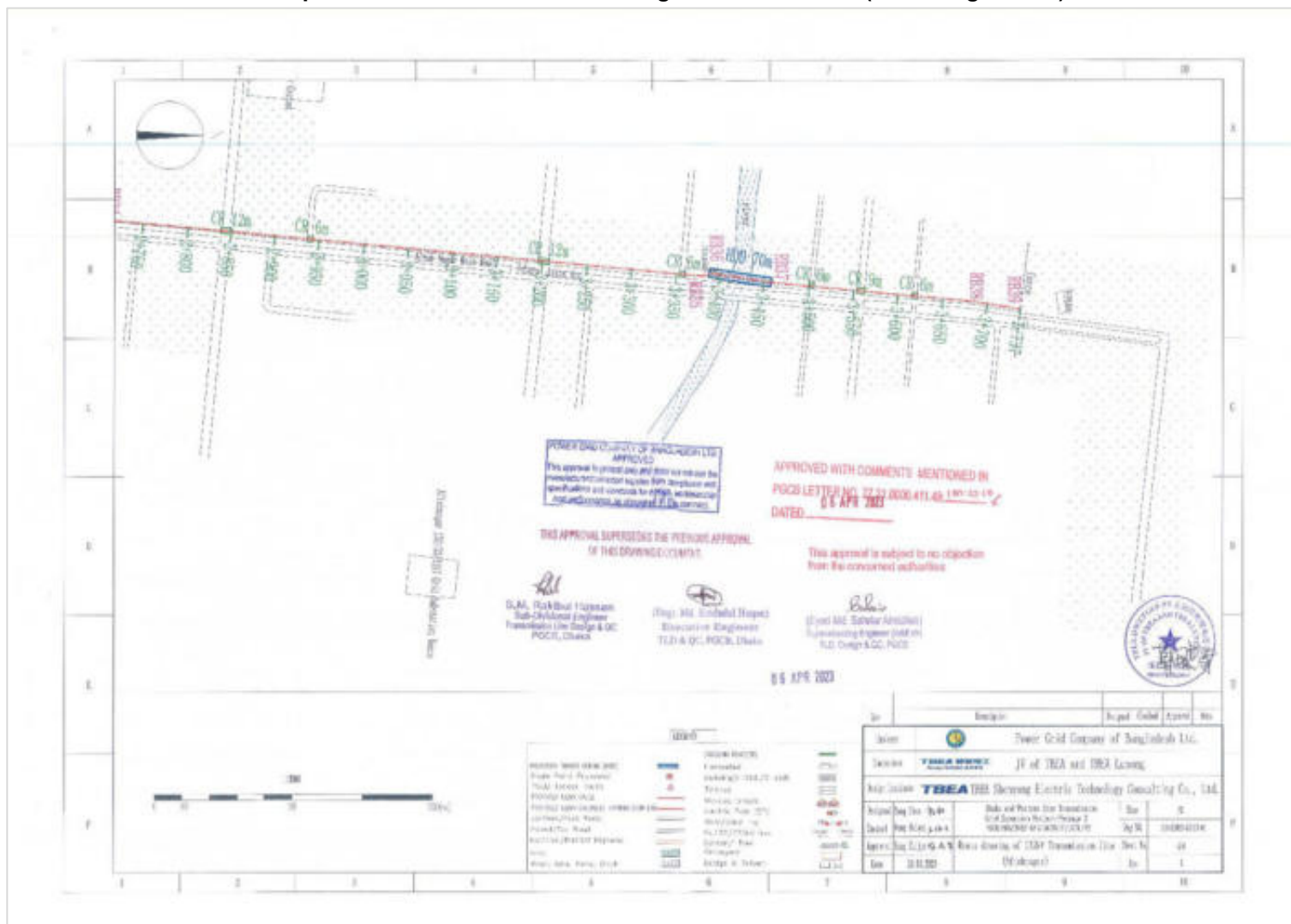
Rampura- Bashundhara 132kV Underground Cable Line (Aftab Nagar Area)



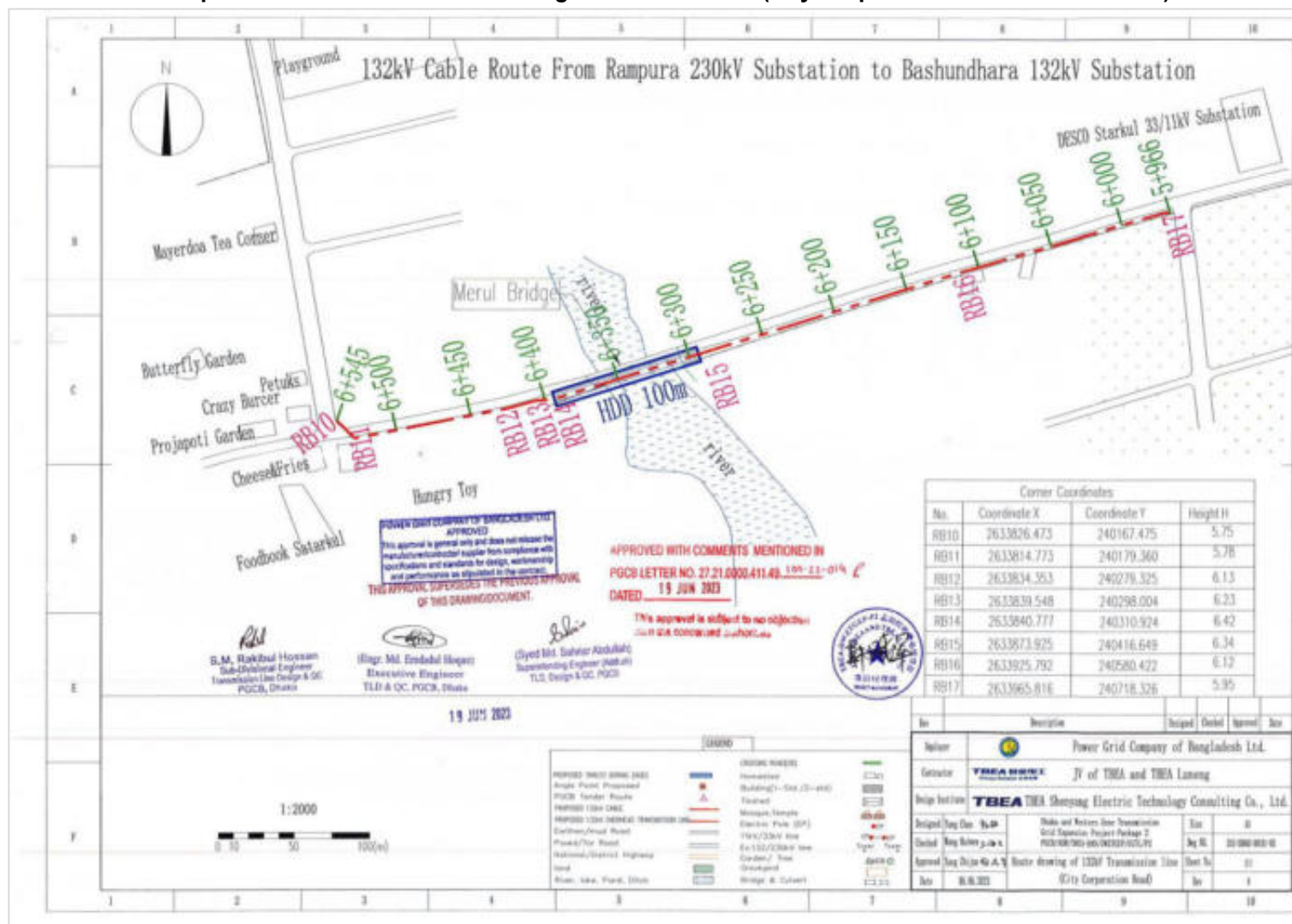
Rampura- Bashundhara 132kV Underground Cable Line (Aftab Nagar Area)



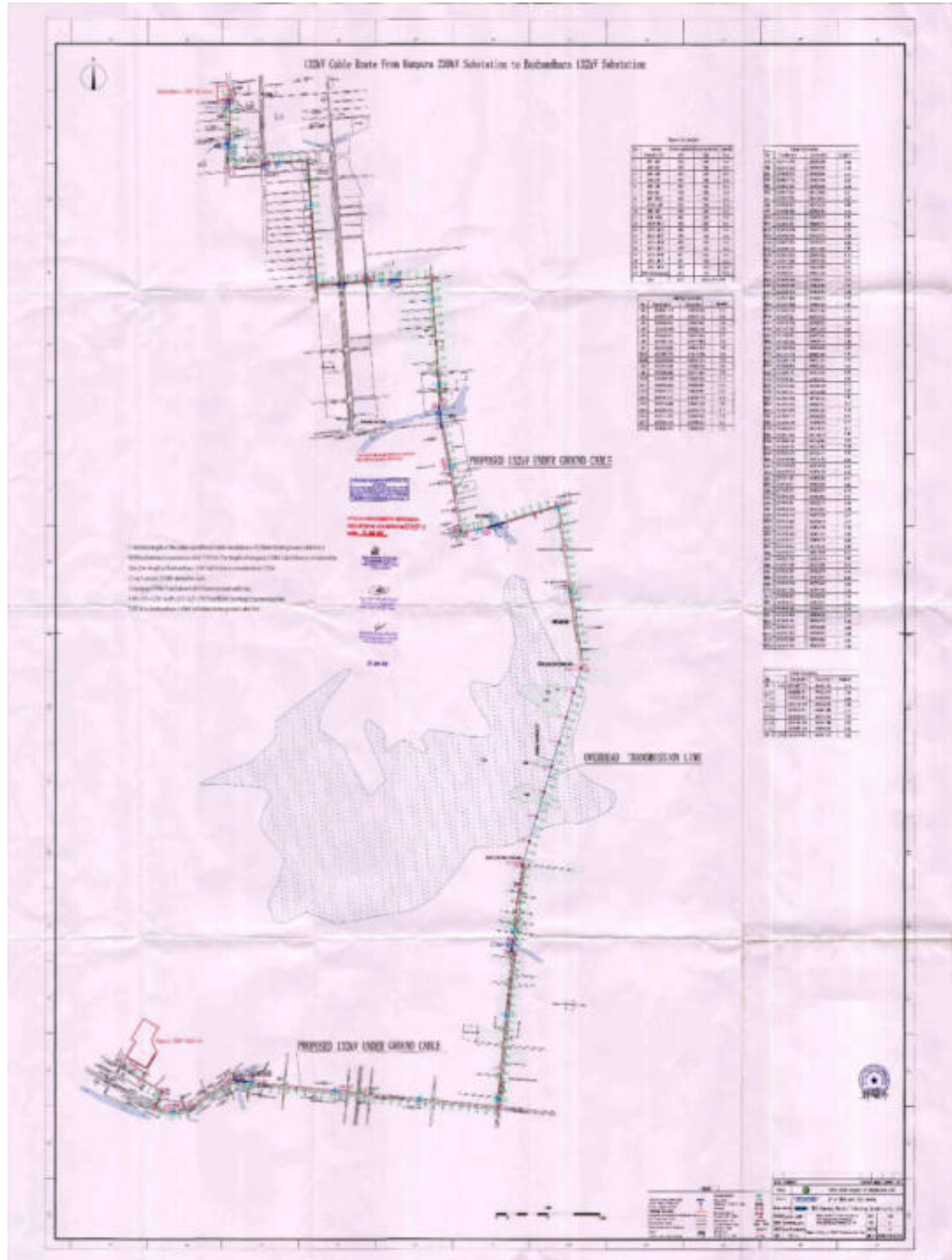
Rampura- Bashundhara 132kV Underground Cable Line (Aftab Nagar Area)



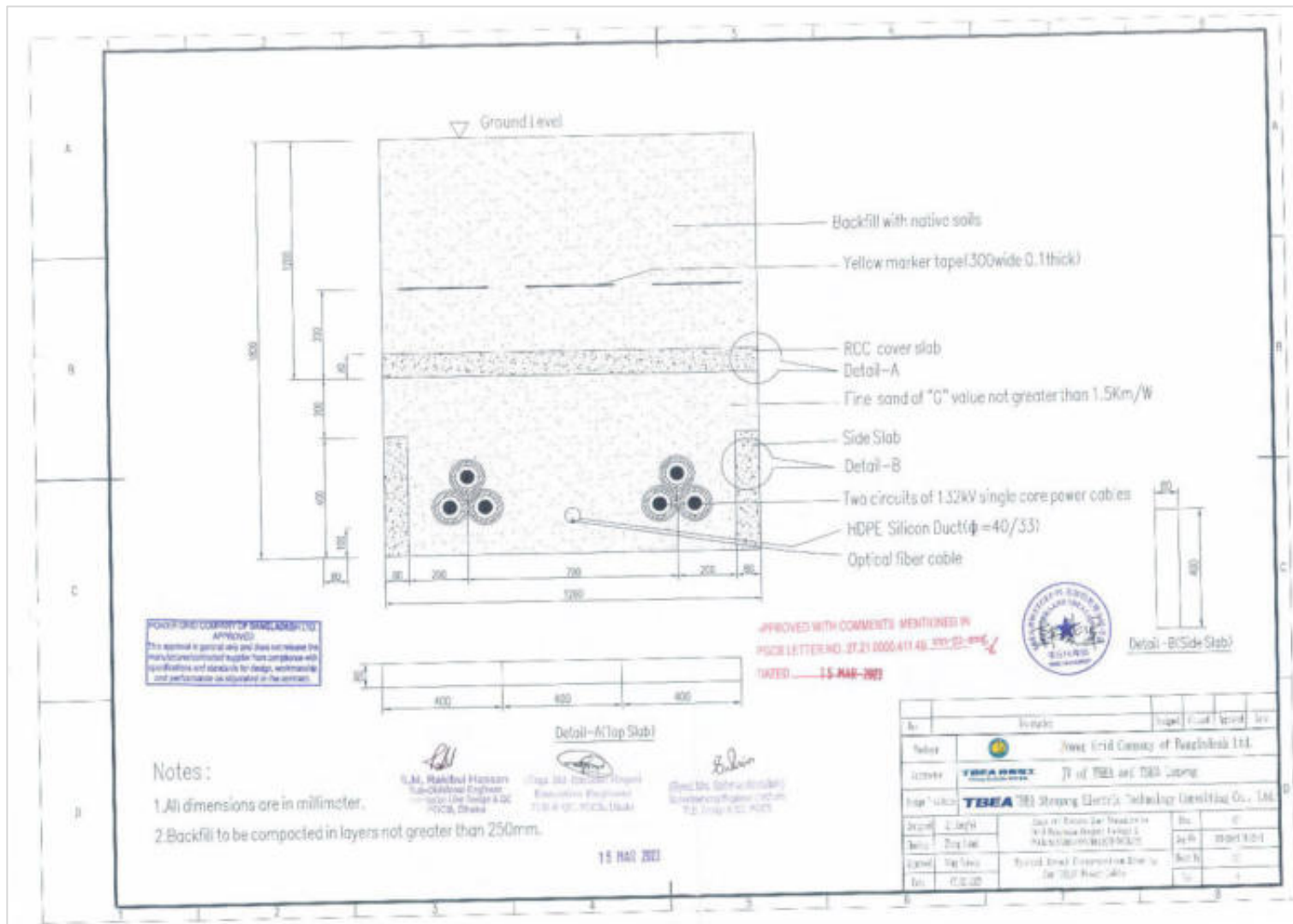
Rampura- Bashundhara 132kV Underground Cable Line (City Corporation and UIU Road Area)

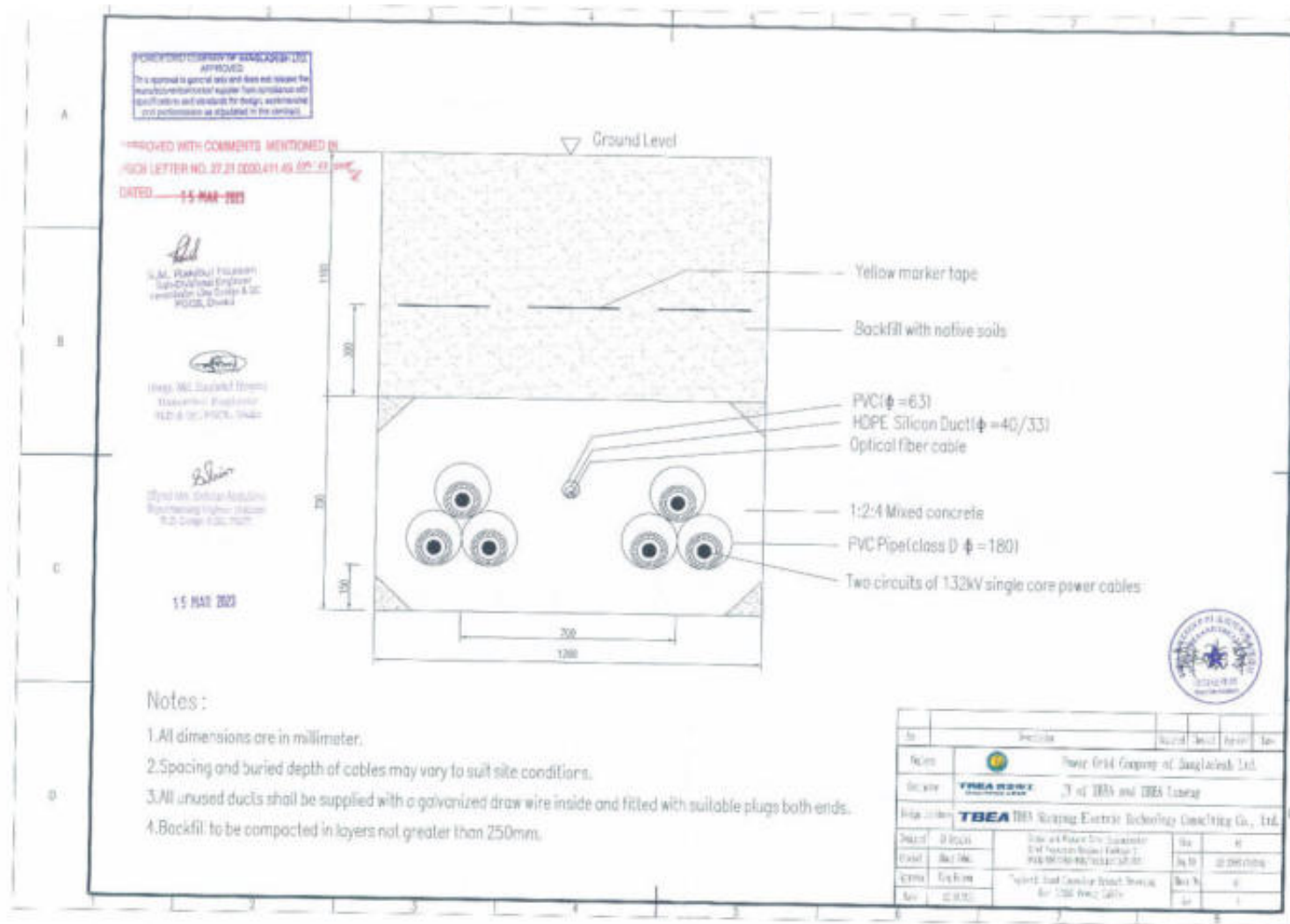


Rampura- Bashundhara 132kV Underground Cable Line (City Corporation and UIU Road Area)



Cross Section Drawing of Rampura- Bashundhara 132kV Underground Cable Line





400/230 kV GIS Substation at Kaliganj, Gazipur





Appendix E: Tree Survey Picture

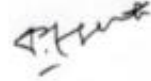




Appendix F-2: Letter to United Property Solutions Limited

	পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিমিটেড প্রধান কার্যালয়ঃ এভিনিউ-৩, জহুরুল ইসলাম সিটি, আফতাবনগর, বাবুচাঁ, ঢাকা-১২১২। ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রীড সম্মেলন ব্যবস্থা সম্প্রসারণ প্রকল্প	
স্মারক নম্বর: ২৭.২১.০০০০.৪৫৩.১৪.০০২.২৩.৩৮৯		তারিখ: ২৬ জুন ১৪২৯
		০৯ এপ্রিল ২০২৩
বিষয়: জাতীয় গ্রিডের রামপুরা ২৩০/১৩২কেভি সুপার গ্রিড উপকেন্দ্র হতে বসুন্ধরা ১৩২/৩৩কেভি গ্রিড উপকেন্দ্র পর্যন্ত ১৩২কেভি আন্ডারগ্রাউন্ড ক্যাবল লাইন নির্মাণ প্রসঙ্গে।		
সূত্র: ক) ইউনাইটেড প্রপার্টি সলিউশন লিঃ এর পত্র : তারিখঃ ১৩/০১/২০২১। খ) পিজিসিবি'র স্মারক নং - ২৭.২১.০০০০.৪৫৩.০০০.১৪.২০.৫৫০; তারিখঃ ১৪/১২/২০২০		
আপনার সদয় অবগতির জন্য জানানো যাচ্ছে যে, ADB, AIIB, পিজিসিবি ও বাংলাদেশ সরকারের যৌথ অর্থায়নে পিজিসিবি'র আওতায় বাস্তবায়নধীন "Dhaka and Western Zone Transmission Grid Expansion Project" শীর্ষক প্রকল্পটি গত ২৬/১১/১৯ইং তারিখে মাননীয় প্রধানমন্ত্রির সভাপতিত্বে অনুষ্ঠিত একনেক সভায় অনুমোদিত হয়েছে। আলোচ্য প্রকল্পের মাধ্যমে ডেসকো এলাকার বিদ্যুৎ সরবরাহ ও নির্ভরযোগ্যতা বৃদ্ধির লক্ষ্যে আফতাবনগরস্থ রামপুরা ২৩০/১৩২কেভি সুপার গ্রিড উপকেন্দ্র হতে বসুন্ধরা ১৩২/৩৩কেভি গ্রিড উপকেন্দ্র পর্যন্ত ১৩২কেভি আন্ডারগ্রাউন্ড ক্যাবল লাইন (প্যাকেজ-২) নির্মাণ করা হবে। তৎপ্রেক্ষিতে, গত ১৬/১০/২০২২ খ্রিঃ তারিখে পিজিসিবি ও টার্ন-কি ঠিকাদার JV of TBEA and TBEA Luneng, China এর মধ্যে একটি চুক্তি স্বাক্ষরিত হয়েছে।		
উল্লিখিত ১৩২কেভি আন্ডারগ্রাউন্ড ক্যাবল লাইনটি পিজিসিবি'র অনুমোদিত রুট ড্রইং (সংযুক্তি-১) অনুযায়ী বেরাইদ রোডের হতে মাদানী এভিনিউ সংযোগ সড়ক পর্যন্ত ইউনাইটেড ইউনিভার্সিটি সংলগ্ন রাস্তা দিয়ে অতিক্রম করবে। United Property Solutions Ltd. উক্ত রাস্তা খননের অনুমতি প্রদান কালে ইউনাইটেড সিটির জন্য ৫০ মেগাওয়াট অতিরিক্ত লোড বরাদ্দের অনুরোধ করে (সংযুক্তি-২)।		
এমতাবস্থায়, বর্ণিত প্রকল্প বাস্তবায়নের স্বার্থে ইউনাইটেড সিটি কর্তৃক চাহিদাকৃত অতিরিক্ত ৫০ মেগাওয়াট লোড বরাদ্দের বিষয় বিবেচনা পূর্বক অবহিত করনের জন্য বিশেষভাবে অনুরোধ করা হলো।		
ব্যবস্থাপনা পরিচালক, ঢাকা ইলেকট্রিক সাপ্লাই কোম্পানি লিমিটেড (ডেসকো)		 ১১-৪-২০২৩ মোঃ ইয়াকুব এলাহী চৌধুরী ব্যবস্থাপনা পরিচালক (অতিরিক্ত দায়িত্ব) ফোন: ০২-৫৫০৪৬৭২১ ইমেইল: md@pgcb.gov.bd
স্মারক নম্বর: ২৭.২১.০০০০.৪৫৩.১৪.০০২.২৩.৩৮৯/১(৬)		তারিখ: ২৬ জুন ১৪২৯
		০৯ এপ্রিল ২০২৩
সদয় অবগতি ও কার্যার্থে প্রেরণ করা হল:		
১) নির্বাহী পরিচালক, প্লানিং ও ডেভেলপমেন্ট বিভাগ, পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিঃ		

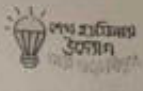
- ২) তত্ত্বাবধায়ক প্রকৌশলী (অতিরিক্ত দায়িত্ব), ডিজাইন এন্ড কোয়ালিটি কন্ট্রোল (ট্রান্সমিশন লাইন) শাখা, পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিঃ
- ৩) উপ-প্রকল্প পরিচালক(তত্ত্বা: প্রকৌঃ), ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রীড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প, পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিঃ
- ৪) নির্বাহী প্রকৌশলী, ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রীড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প, পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিঃ
- ৫) প্রধান নির্বাহী কর্মকর্তা, ইউনাইটেড প্রপার্টি সলিউশনস লিঃ
- ৬) দপ্তর কপি।



১১-৪-২০২৩

মোঃ আবুল কাশেম
প্রকল্প পরিচালক (প্রধান প্রকৌঃ)

Appendix F-3: Letter to Easter Housing Limited,

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



২৭.২১.০০০০.৪৫০.১৪.০০২.২৩. ১২৩১ তারিখ: ১২/১১/২০২০ খ্রিঃ

ব্যবস্থাপনা পরিচালক
ইন্টার হাউজিং লিমিটেড
৫৯/বি, কামাল আব্বাসপুরক এলিনিট
সেক্যান হোস্টাইন সেলার
কনানী, ঢাকা-১১১০।

বিষয়: আবাসিক এলাকা দিয়ে অভিন্নমর্যাদা আর্থিক প্রিভের "রাহশুরা-বসুহুরা ১০২কিএম আন্তঃপ্রাণ্টিক ক্যাবল লাইন" নির্মাণ কাজে সড়ক খননের ক্ষতিপূরণ এবং আনয়ন ব্যবস অর্থ পে-অর্ডারের মাধ্যমে অমাকল্প।

স্মারক নং- ইন্টার হাউজিং ও পিভিসিবি কর্তৃপক্ষের মধ্যে স্বাক্ষরিত পত্র ১১/০৬/২০২০ ইং তারিখের সমঝোতা স্মারক।

জনাব,

উপর্যুক্ত বিষয় ও সূত্রের প্রেক্ষিতে জানানো যাচ্ছে যে, ADB, AIIB, পিভিসিবি ও বাংলাদেশ সরকারের যৌথ অর্থায়নে পিভিসিবি'র আওতাধীন বাস্তবায়নধীন "Dhaka and Western Zone Transmission Grid Expansion Project" কর্তৃক 'রাহশুরা-বসুহুরা ১০২কিএম আন্তঃপ্রাণ্টিক ক্যাবল লাইন নির্মাণ করা হচ্ছে। যুক্তির শর্ত অনুযায়ী উক্ত আন্তঃপ্রাণ্টিক ক্যাবল লাইন নির্মাণ কাজে সড়ক খনন কাজের বিলম্বিত ক্ষতিপূরণ ব্যবস (অফারডেফেন্ড) সর্বমোট ৭,০৭৮,০০০/- (সত্তর লক্ষ আটাত্তর হাজার তিনশত) টাকার একটি পে-অর্ডার (পে-অর্ডার নং- ৪১১১০৬৪; তারিখ- ১১.১১.২০২০; প্রাইম ব্যাংক: কনানী শাখা) এবং আনয়ন ব্যবস (ফেরডেফেন্ড) সর্বমোট ৭,০৭৮,০০০/- (সত্তর লক্ষ আটাত্তর হাজার তিনশত) টাকার একটি পে-অর্ডার (পে-অর্ডার নং- ৪১১১০৬৫; তারিখ- ১১.১১.২০২০; প্রাইম ব্যাংক: কনানী শাখা) "ইন্টার হাউজিং লিমিটেড" এর অনুকূলে চার্টার্ড জিএসআর JV of TBEA and TBEA LUNENG কর্তৃক হাফিল করা হয়েছে, যা একতরফে সংযুক্ত করে প্রেরণ করা হলো। উক্ত পে-অর্ডারটি প্রথমপূর্বক চিকিৎসার প্রতিকার "JV of TBEA and TBEA LUNENG" (Contract No: PGCB/ADB/3853-BAN/DWZTGEP/UGTL/P2; Lead Partner: TBEA CO., LTD.) এর নামে Money Receipt প্রদান এবং সড়ক খননের অনুমতি প্রদান করার অন্তর্ভুক্তি অনুরোধ করা হলো।

এখানে উল্লেখ্য, সড়ক খনন কাজ শেষে আনয়নের অর্থ চিকিৎসার প্রতিকার বরাবর ফেরত প্রদানের জন্য বিশেষভাবে অনুরোধ করা হল।

সংযুক্তি ১। পে-অর্ডারের মূল কপি

(মোঃ আবুল কাশেম)
আইডি নং-০০১৬৩
প্রকল্প পরিচালক (প্রধান প্রকৌশলী),
ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প
পিভিসিবি, ঢাকা।

অনুলিপি (জ্যেষ্ঠতা অনুযায়ী নয়)

১। নির্বাহী পরিচালক (পিএডভি), পিভিসিবি।
২। প্রধান প্রকৌশলী (পিএডভি), পিভিসিবি।
৩। উপ-প্রকল্প পরিচালক, ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প পিভিসিবি।
৪। নির্বাহী প্রকৌশলী, ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প পিভিসিবি।
৫। Project Manager of JV of TBEA and TBEA LUNENG।
৬। অফিস কপি।

PGCB Bhaban, Avenue-3, Jahurul Islam City, Aftabnagar, Badda, Dhaka-1212
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Received
১২/১১/২০



Letter from East West property Development Private Limited



East West Property Development (Pvt) Ltd.
ইস্ট ওয়েস্ট প্রপার্টি ডেভেলপমেন্ট (প্রাই) লিমিটেড
(An Enterprise of Bashundhara Group)

সূত্র: ইডব্লিউডি(পাও)/ই/৪৪/এফ-১৪৮/ ২৮৩ /২০ইং

মার্চ ২৭, ২০২৩ইং

বরাবর
প্রকল্প পরিচালক (প্রধান প্রকৌশলী)
ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সংস্থাপন ব্যবস্থা সম্প্রসারণ প্রকল্প
পিজিসিবি, ঢাকা।

**বিষয় : বসুন্ধরা আবাসিক এলাকা অতিক্রমতব্য জাতীয় গিডের “রামপুরা-বসুন্ধরা ১৩২কেভি আভ্যাক্সিউড ক্যাবল লাইন”
নির্মাণ কাজে সড়ক খননের অনুমতি প্রদান প্রসঙ্গে।**

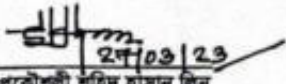
সূত্র: স্মারক নং- ২৭.২১.০০০০.৪৫৩.০১৪.০২.২৩.৩০২ তারিখ: ১৬ মার্চ, ২০২৩ইং।

জনাব,

বর্ণিত বিষয় ও সূত্রের আলোকে আপনার দৃষ্টি আকর্ষণপূর্বক জানানো যাচ্ছে যে, ADB, AIIB, পিজিসিবি ও বাংলাদেশ সরকারের যৌথ অর্থায়নে পিজিসিবি'র আওতায় বাস্তবায়নায়ী “Dhaka and Western Zone Transmission Grid Expansion Project” শীর্ষক কর্তৃক প্রদত্ত “রামপুরা-বসুন্ধরা ১৩২কেভি ডাবল সার্কিট আভ্যাক্সিউড ক্যাবল লাইন” নির্মাণ কাজ করার জন্য অনুমোদিত বসুন্ধরা আবাসিক এলাকার লাইন রুট অনুযায়ী উল্লিখিত সড়ক খনন কাজের বিপরীতে ক্ষতিপূরণ বাবদ সর্বমোট ১,২৯,৬১,৯৯৫/- (এক কোটি উনত্রিশ লক্ষ একশত ছয় হাজার নয়শত পঁচাত্তর টাকা) মাত্র “ইস্ট ওয়েস্ট প্রপার্টি ডেভেলপমেন্ট (প্রাই) লিমিটেড” এর অনুকূলে পে-অর্ডারের মাধ্যমে প্রদান করে রাস্তা খনন কাজের অনুমতি সংগ্রহের অনুরোধ করা হলো।

অতএব, উক্ত বিষয়ে প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য বিনীত অনুরোধ জানানো যাচ্ছে।

ধন্যবাদান্তে,



প্রকৌশলী শহিদ হাসান লিট
উর্ধ্বতন নির্বাহী পরিচালক (পুরকৌশল)
ইস্ট ওয়েস্ট প্রপার্টি ডেভেলপমেন্ট প্রাই লিমিটেড

ব্যবস্থাপনা কর্তৃপক্ষ:

১) সেক্রেটারী টু মাননীয় চেয়ারম্যান, বিজি।

অনুলিপি

১. উপ-ব্যবস্থাপনা পরিচালক (হিসাব), ই ডব্লিউ পি ডি (পাও)।
১. নির্বাহী পরিচালক (এস্টেট) এবং চীফ কোঅর্ডিনেটর (সেলস্ এবং ল্যান্ড ডেভেলপমেন্ট), ইডব্লিউপিডি।
২. অফিস কপি।

Corporate Office
Plot # 125/A, Block # A, Bashundhara R/A
Dhaka-1229, Bangladesh, Phone (PABX): 8432008
Direct: 8431061, 8431071, 8431995, 8431428
Fax: +88-02-8431845, Email: ahr-ewpd@bg.com.bd
Website: www.bashundharagroup.com

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Bashundhara R/A, Dhaka-1229
Phone: 8431024-28, Fax: +88 02 8431085

BIHQ-2
Plot#56/A, Block-C,
Umme Kulsum Road
Bashundhara R/A, Dhaka-1229
Phone: 8432289-93, 8431256-58
Fax: +88 02 55037257, Email: info@bg.com.bd

Letter from Shadesh Properties Limited



Received: 02
Date: 06.06.2021
DWZTGE Project

তারিখ: ৪ জানুয়ারী, ২০২১

বরাবর,
প্রকল্প পরিচালক (প্রধান প্রকৌশলী)
ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সম্প্রসারণ প্রকল্প,
পিজিসিবি, ঢাকা।

সূত্র: স্মারক নং-২৭.২১.০০০০.৪৫৩.০০০.১৪.২০.৫৪৯, তারিখ: ১৪/১২/২০২০ ইং

বিষয়: সূত্রে উল্লেখিত স্মারক নং অনুযায়ী নির্মাণাধীন ১৩২ কেভি রামপুরা-বসুন্ধরা আন্ডারগ্রাউন্ড ক্যাবল লাইনের অংশ বিশেষ আকতাবনগর ইন্টার্পাইন হাউজিং সংলগ্ন স্বদেশ প্রপার্টিস লিমিটেড এর এলাকার মধ্য দিয়ে ভূগর্ভে স্থাপনের লেআউট নবায়ন প্রসঙ্গে।

জনাব,

ভেসকো এলাকায় বিদ্যুতের নির্ভরযোগ্যতা বৃদ্ধির লক্ষ্যে বাংলাদেশ সরকার এবং Asian Development Bank (ADB) এর ঋন সহায়তায় পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিমিটেড (পিজিসিবি) কর্তৃক প্রস্তাবিত রামপুরা ২৩০/১৩২ কেভি সুপার গ্রিড উপকেন্দ্র হতে বসুন্ধরা ১৩২/৩৩ কেভি গ্রিড উপকেন্দ্র পর্যন্ত ১৩২ কেভি আন্ডারগ্রাউন্ড ক্যাবল লাইনের কাজ সম্পন্ন করার জন্য রাজ্য খননের প্রয়োজন হবে যার কিছু অংশ সংযুক্ত লেআউট অনুযায়ী স্বদেশ প্রপার্টিস লিমিটেড কর্তৃক চলমান সানভ্যালী আবাসিক প্রকল্পের মধ্য দিয়ে স্থাপিত হবে। যেহেতু ক্যাবল লাইনের প্রস্তাবিত লেআউট অনুযায়ী কেবল লাইনের পুরো অংশটুকু সানভ্যালী আবাসনের প্রস্তাবিত লেআউটের প্রস্তাবিত সড়ক বরাবর প্রস্তাবিত হয় নাই এবং উক্ত প্রজেক্টের উন্নয়ন কাজ চলমান রয়েছে, সেহেতু ভবিষ্যত জটিলতা এড়ানোর লক্ষ্যে উক্ত প্রস্তাবিত লেআউটটিকে নবায়ন করে সুবিধাজনক সড়ক বরাবর স্থাপন করার জন্য প্রস্তাব করা হল। এখানে উল্লেখ্য যে, উক্ত নবায়িত লেআউটে কিছু অংশে ওভারহেড (overhead cable line) স্থাপনের প্রস্তাব সংযুক্ত করা হয়েছে।

এমতাবস্থায় সংযুক্ত লেআউটের আলোকে উক্ত ক্যাবল লাইনের জন্য পুনরায় লেআউট প্ল্যান প্রদান করার জন্য অনুরোধ জানানো হলো।

XN-1
msk
৬/১/২০২১

ধন্যবাদান্তে,



(মোঃ হাবিবুল করিম)

সিনিয়র জেনারেল ম্যানেজার (ইঞ্জিনিয়ারিং)
স্বদেশ প্রপার্টিস লিমিটেড
ডাহের টাওয়ার, প্লট নং- ১০ (৩য় তলা)
গুলশান সার্কেল- ২, ঢাকা- ১২১২



Taher Tower Shopping Centre, Plot # 10 (3rd Floor), Gulshan Circle # 2, Dhaka-1212, Bangladesh
Tel : 9851608, 9851620, 9893294, 8832685-86, Fax : 880-2-9893295, E-mail : info@swadeshproperties.com, www.swadeshproperties.com

Letter from United Group



NEPTUNE LAND
DEVELOPMENT
LIMITED

স্মারকঃ ইউনাইটেড সিটি/পাওয়ার গ্রিড/২০২৩-১
তারিখঃ ০১ আগস্ট ২০২৩

বরাবর
প্রকল্প পরিচালক (প্রধান প্রকৌশলী)
ঢাকা এবং পশ্চিমাঞ্চলীয় গ্রিড সঞ্চালন ব্যবস্থা সমন্বয়ন প্রকল্প
পিজিসিবি, ঢাকা

বিষয়ঃ ইউনাইটেড সিটি এলাকা দিয়ে অতিক্রমতব্য “রামপুরা-বসুন্ধরা ১৩২ কেভি আন্তঃগ্রাউন্ড ক্যাবল সঞ্চালন লাইন” নির্মাণ কাজ সম্পাদন প্রসঙ্গে।

পূর্ববর্তী স্মারকঃ

১। পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ স্মারক নং-২৭.২১.০০০০.৪৫৩.০০০.১৪.২৩.১২৪ তারিখ ৩০ জানুয়ারি ২০২৩।

জনাব,

বর্ণিত বিষয় ও স্মারকের আলোকে আপনার সদয় দৃষ্টি আকর্ষণপূর্বক জানানো যাচ্ছে যে, ADB, AIIB, পিজিসিবি ও বাংলাদেশ সরকারের যৌথ অর্থায়নে পিজিসিবির আওতায় বাস্তবায়নাধীন “Dhaka and Western Zone Transmission Grid Expansion Project” সংক্রান্ত “রামপুরা-বসুন্ধরা ১৩২ কেভি আন্তঃগ্রাউন্ড ক্যাবল সঞ্চালন লাইন” নির্মাণ (প্যাকেজ-২) কাজ করার জন্য অনুমোদিত ইউনাইটেড সিটি এলাকার লাইন রুট অনুযায়ী উল্লেখিত সড়ক খনন কাজের বিপরীতে ক্ষতিপূরণ ব্যবন সর্বমোট টাকা ৫০,৪৮,৭৯৫.০০ (পঞ্চাশ লক্ষ আটচল্লিশ হাজার সাত শত পচানব্বই টাকা) মাত্র “নেপচুন ল্যান্ড ডেভেলপমেন্ট লিমিটেড” এর অনুকূলে পে-অর্ডারের মাধ্যমে প্রদান করে রাখা খনন কাজের অনুমতি সংগ্রহ করতে অনুরোধ করা হলো।

আপনাদের সদয় অবগতি ও প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো।

ধন্যবাদান্তে,

মেজর (অবঃ) এ এন এম শহীদুল আলম
এডমিনিস্ট্রেটর, ইউনাইটেড সিটি
ইউনাইটেড গ্রুপ

আভ্যন্তরীণঃ

ডাইরেক্টর এডমিন
সিইও, ইউপিএসএল
চীফ আর্কিটেক্ট, ইউপিএসএল
চীফ ইঞ্জিনিয়ার, ইউপিএসএল
গ্রুপ সিএফও
হেড অফ এডমিন
হেড অফ সিকিউরিটি এন্ড সেফটি
মোঃ আনোয়ার হোসেন, জেনারেল ম্যানেজার, ইউপিএসএল
জেনারেল ম্যানেজার, ল্যান্ড
টাউন প্ল্যানার

Appendix G: Equipment Requirement

Kaliganj Substation

Design, Supply, Installation, Testing and Commissioning of new 400/230/132kV GIS Substation at Purbachal on turnkey basis.
Price Schedule

89-13

Item No.	Description of Equipment Requirement	Unit	Quantity	Foreign Currency (US\$)		Local Currency (in BDT)	
				Unit Price	Total Price	Unit Price	Total Price
				(1)	(2) = (1) x (2)	(3)	(4) = (3) x (4)
IM	Civil Works, Building and Foundation						
1301*	1. Complete compacted land development with camouflaged earth filling including approach road	CuM	400.041			833.00	266,482,383.00
	2. Slope protection	sqm	350			293.00	103,150.00
	3. Complete civil items required for outdoor works						
	3.1. Outdoor gully foundation in 400kV switchyard	Sqm	3		3,744,136.00		11,728,780.00
	3.1.1. Gully column	Sqm	21		68,211.00		1,432,641.00
	3.1.2. Outdoor equipment foundation in 400kV switchyard	Sqm	12		27,596.00		330,496.00
	3.1.3. CVT	Lot	1		27,689,651.00		27,689,651.00
	3.2. Breaker support	Sqm	17		1,433,340.00		24,743,130.00
	3.2.1. Outdoor gully foundation in 132kV switchyard	Sqm	17		1,433,340.00		24,743,130.00
	3.2.1.1. Gully column	Sqm	24		38,798.00		1,386,991.00
	3.2.1.2. Outdoor equipment foundation in 132kV switchyard	Sqm	3		853,942.00		6,828,736.00
	3.2.1.3. Gully column	Sqm	24		24,893.00		1,386,991.00
	3.2.2. Outdoor equipment foundation 132kV switchyard	Sqm	24		24,893.00		1,386,991.00
	3.2.2.1. Gully column	Sqm	2		44,248.00		88,496.00
	3.2.2.2. Outdoor equipment foundation 132kV switchyard	Sqm	4		50,750.00		202,756.00
	3.2.2.3. CVT	Sqm	6		39,392.00		236,352.00
	3.2.2.4. DVT	Sqm	18		39,356.00		707,340.00
	3.2.2.5. S.A.S.A	Sqm	13		52,867.00		793,085.00
	3.2.2.6. Lightning arrester	Sqm	2		128,722.00		257,444.00
	3.2.2.7. Tertiary bus connection	Sqm	2		491,199.00		982,398.00
	3.2.2.8. Transformer foundation	Sqm	1		6,549,244.00		65,492,440.00
	3.2.2.9. Blast wall with foundation	Sqm	1		3,538,715.00		35,387,150.00
	3.2.2.10. Property line demarcation	Sqm	1		3,538,715.00		35,387,150.00
	3.2.2.11. Security Boundary Wall	Sqm	230		3,540.00		814,200.00
	3.2.2.12. Blast wall with foundation	Sqm	675		49,441.00		33,371,675.00
	3.2.2.13. Blast wall without foundation	Sqm	230		37,883.00		13,898,930.00

Name of Bidder: China Electric Power Equipment and Technology Co., Ltd.

Signature of Bidder:

Purbachal Substation

Bid for Design, Supply, Installation, Testing and Commissioning of 400/230/132kV GIS Substation at Kaliganj on turnkey basis (Package-3)

94-01

Item No.	Description of Equipment Requirement	Unit	Quantity	Foreign Currency (US\$)		Local Currency (in BDT)	
				Unit Price	Total Price	Unit Price	Total Price
				(1)	(2) = (1) x (2)	(3)	(4) = (3) x (4)
112	Tariff metering at LV side (Main)	Lot	1			25,631.00	25,631.00
IM	Civil Works, Building and Foundation (Details in Schedule B4)						
1301*	1. Complete compacted land development with camouflaged earth filling	CuM	438,272			293.00	129,891,296.00
	2. Slope protection	sqm	14,525			280.00	3,711,300.00
	3. Complete civil items required for outdoor works including boundary wall and slope protection						
	3.1. Outdoor gully foundation in 400kV switchyard	Sqm	18		1,975,903.00		35,566,254.00
	3.1.1. Gully column	Sqm	23		51,340.00		1,179,230.00
	3.1.2. Outdoor equipment foundation in 400kV switchyard	Sqm	24		43,950.00		1,054,800.00
	3.1.3. CVT	Lot	1		24,714,598.00		24,714,598.00
	3.2. Breaker support	Sqm	11		1,738,191.00		19,090,121.00
	3.2.1. Outdoor gully foundation in 132kV switchyard	Sqm	11		1,738,191.00		19,090,121.00
	3.2.1.1. Gully column	Sqm	28		45,171.00		1,261,668.00
	3.2.1.2. Outdoor equipment foundation 132kV switchyard	Sqm	12		37,409.00		448,908.00
	3.2.1.3. Gully column	Sqm	2		38,299.00		76,598.00
	3.2.1.4. Outdoor equipment foundation 132kV switchyard	Sqm	4		37,956.00		151,824.00
	3.2.1.5. CVT	Sqm	6		44,314.00		265,884.00
	3.2.1.6. DVT	Sqm	6		46,032.00		276,192.00
	3.2.1.7. S.A.S.A	Sqm	2		164,353.00		328,706.00
	3.2.1.8. Tertiary bus connection	Sqm	2		420,218.00		840,436.00
	3.2.1.9. Transformer foundation including oil pit & drainage way	Sqm	2		5,827,238.00		11,654,476.00
	3.2.1.10. Blast wall with foundation	Sqm	1		2,313,891.00		23,138,910.00
	3.2.1.11. Property Line Demarcation	Sqm	1130		2,930.00		3,310,500.00
	3.2.1.12. Security Boundary Wall for overall plan (actual payment shall be as per actual work at site)	Sqm	1000		39,912.00		39,912,000.00
	3.2.1.13. Substation Main gate	Sqm	2		581,948.00		1,163,896.00
	3.2.1.14. Approach road (for vehicle)	Sqm	38		46,877.00		1,781,326.00

Name of Bidder: China Electric Power Equipment and Technology Co., Ltd.

Signature of Bidder:

Appendix H: CESMP of Kaliganj Substation



CONSTRUCTION ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (CESMP)

January 2023

5.1 Project Related Activities:

The satisfactory design, construction, operation and maintenance of 400 KV Kaliganj substations will be to the satisfaction of the PGCB as per tender document. The detail scope of work for specific sub-stations is described in Schedule A of the bidding document. The work includes but not limited the design, detailing, construction and maintenance of the following:

- Site survey and subsoil investigation.
- Site preparation including retaining walls or site slope protection, cutting or filling up to the level specified and leveling as well as compaction.
- Road including access road with a culvert or sufficient drainage pipes and roadways within sites, surfacing the entire area within site boundary and surface water drainage.
- Foundations for all equipment to be installed in outdoor switchyards, control building, indoor switchgear and any other building required for the project.
- GIS and control building (complete building consisting of structural reinforced concrete frames, brick walls, concrete roof and floor slabs) with cable ceiling room.
- Motorized door for GIS entrance.
- Floor finishing: Homogeneous floor tiles cable floor, GIS room floor & control room floor, Nitocote epoxy resin coating in battery room.
- Cable trenches, cable tunnels, cable ducts and pipe ducts.
- Water supply and plumbing installations.
- Surface water and foul drainage.
- Boundary wall and entrance gate.
- Property line demarcation.
- Air conditioning and ventilation
- Lighting, small power, external floodlighting, emergency lighting and fire protection.

5.1.1 Substation Area Clearing and Land Filling

After receiving the final permit/clearance from PGCB, China Electric Power Equipment and Technology Co., Ltd shall clean and remove the unspecified & the unsuitable materials (root of paddy or bushes) from the substation area. Land development work shall be carried out by dredged filling material or by carried earth/filling sand. The height of land filling will be done high from the road surface as per tender document.

5.1.2 Making Temporary Boundary Wall

Before land filling, China Electric Power Equipment and Technology Co., Ltd have to construct necessary dyke/embankment for protection the developed land as per tender document. Bamboo made or tin made temporary boundary wall will make for the substation area security, mitigation measure of wild life as well as awareness for the local people. When the permanent boundary wall will complete, temporary boundary wall will shift elsewhere and materials will be sold as the solid waste by China Electric Power Equipment and Technology Co., Ltd.

5.1.3 Structure Foundation and Installation

The next step in the construction process is to drill foundations for the control building structures. The foundation plan and other engineering designs will be given by China Electric

CESMP/SUB/PGCB/ADB-AIIB/ DWZTGP/GIS/P5

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CONSTRUCTION ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (CESMP)

January 2023

- The GIS has a maximum annual SF6 leak rate of 1%, as represented by the GIS's manufacturer;
- PGCB must maintain their GIS in accordance with maintenance procedures or industry best practices that have the effect of reducing leakage of SF6;
- If, beginning with the second time adds SF6 to a GIS unit, or group of commonly-owned, leased, operated, or controlled GIS, PGCB becomes aware that the annual average leakage rate for the new GIS equipment is greater than 1%;
- PGCB must record, no less than annually, the amount of SF6 added to each piece of active GIS equipment

16.8 Management of Vegetation Clearing

The works, including the opening up of substation worksites (e.g. camps, access roads, and storage yards) may require vegetation clearance in work areas. Vegetation includes crops, trees, shrubs, bushes, grasses and other minor vegetation. Supervisors shall be trained in the controlled felling of trees to prevent impacts beyond worksites. They shall also be trained on the importance of identification and preservation of wild fauna encountered and disturbed during the stripping operation. The following specification will be

- Vegetation clearing using chemicals is not permitted.
- Vegetation clearing using bulldozer is not permitted in zones less than 30 m from areas designated as sensitive by the Engineer, where only manual clearing is authorized.
- Where it is not possible to restrict the timing of construction practices, vegetation shall be removed outside the breeding period so that works can carry on into this period unhindered.

16.9 Management of Substation Biodiversity

China Electric Power Equipment and Technology Co., Ltd shall ensure that all personnel are informed and aware of the importance to protect species, habitats, fauna, and flora and are informed about wildlife encounter procedures. Information and awareness training is documented. PGCB will provide a range of ecological surveys prior to the start of construction. These will include but not be limited to the type and location of identified species and habitats of conservation interest within the Project Area of substation, and any resulting measures that are required by China Electric Power Equipment and Technology Co., Ltd. PGCB will provide a constraints map, showing the areas where sensitive, endangered or breeding species are known to occur, including protected areas, sites of importance for nature conservation, wildlife refuges, nature and national parks, important bird areas. PGCB will inform about seasons for the protection of birds and wildlife. As a result of protecting birds and wildlife, construction is restricted during a certain period and/or the China Electric Power Equipment and Technology Co., Ltd must take precautionary measures in compliance with respective national laws and/or as stipulated by the respective local authorities. The proposed location has some small flora, before

CESMP/SUB/PGCB/ADB-AIIB/ DWZTGE/ GIS/P5

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CONSTRUCTION ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (CESMP)

January 2023

started the civil and electrical work, China Electric Power Equipment and Technology Co., Ltd will carefully clean the grass from the yard of substation.

16.10 Management of Erosion and Sediment transport

Erosion and sediment control shall be taken into consideration from the beginning of the construction phase, i.e. from site clearance. China Electric Power Equipment and Technology Co., Ltd plans earthworks and optimizes the management of space to ensure that all cleared surfaces and areas exposed to soil erosion are minimized on all substation project areas and erosion is minimized as far as practical. China Electric Power Equipment and Technology Co., Ltd shall determine the appropriate locations and the type of erosion control measures required, to be agreed with the Engineer. For the soil erosion, China Electric Power Equipment and Technology Co., Ltd will be designed the boundary wall for Kaliganj substation.

16.11 Wildlife Management Plan at SS side

The wildlife impacts of sub-station construction and operation include bird electrocutions and collisions, changes in predator-prey relations in and the edges of the Kaliganj substation, destruction or alteration of wetland and aquatic environments, and increases in hunting and fishing enabled nearby the sites of substation project during the construction phases. Kaliganj substation area has only domestic animals (goat, cow, hen), dogs, foxes like wildlife. The temporary tin shed wall for the Kaliganj construction of sub-station area will be sufficient for save or protect them for wildlife impacts. Before started work, China Electric Power Equipment and Technology Co., Ltd will give barricade to protect wild life and soil erosion.

16.12 Dangerous Spices Management Plan

The project site is open space of all sides. Any dangerous species like snake may be enter to the project yard. It may note that by biting of snake, any workers will be died. Carbolic acid may be used for the protection of snake at the Kaligonj project sites of substation during the construction period.

Table 16.1: Site Specific Environmental Management Plan

SN	Environmental activities /aspects/imapcts	Management plan	Responsible	Monitoring Responsibility
1	Liquid effluents	It will settle in reservoir for settling before discharge. The settled water will re-use in the civil work during construction	CET	PGCB
2	Dust Emission	CET will spray water to mitigate dust emission	CET	PGCB
3	Noise Management	CET will monitor noise and always use new machinery for the	CET	PGCB

CESMP/SUB/PGCB/ADB-AIIB/ DWZTGEP/GIS/P5

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Appendix I: EMP Implementation Conditions (Contract Document)

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Section 8: Special Conditions of Contract

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rials, equipment, and services. At the Employer's request, the Contractor may be required to provide evidence of the origin of materials, equipment and services.

- 46.3 For the purposes of SCC 46.2, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

47. Environmental Management Plan

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

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

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

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

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

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



Package 5

Section 8: Special Conditions of Contract

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The Dispute Board shall consist of 3 (three) members.

45.2 Appointment (if not agreed) to be made by:

Head, Department of Electrical & Electronics Engineering, Bangladesh University of Engineering & Technology, Bangladesh

The appointing entity or official must not, in any way, be related or connected to the Employer or Contractor.

45.5 Rules of procedure for arbitration proceedings:

(a) Contracts with foreign Contractors:

International arbitration shall be conducted in accordance with the Rules of the Singapore International Arbitration Centre (SIAC).

Arbitration shall be administered by the Singapore International Arbitration Centre (SIAC).

The place of arbitration shall be the place of the institution administering the arbitration.

(b) Contracts with Contractors being nationals of the Employer's country:

Arbitration shall be conducted in accordance with the "Bangladesh Arbitration Act 2001".

The place of arbitration shall be Dhaka, Bangladesh

46. Eligibility

Not Applicable.

47. Environmental Management Plan

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

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

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix [2.3]; and (ii) any corrective or preventative actions set out in safeguards moni-



toring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.
The Contractor shall allocate a budget for compliance with these measures, requirements and actions.*

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

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



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Section 8: Special Conditions of Contract

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- (b) Contracts with Contractors being nationals of the Employer's country:

Arbitration shall be conducted in accordance with the "Bangladesh Arbitration Act 2001".

The place of arbitration shall be Dhaka, Bangladesh

46. Eligibility

Not Applicable.

47. Environmental Management Plan

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

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

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

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

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

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

