



## **SOIL TESTING REPORT**

**PROJECT:** “Testing of Soil Sample from Design and Build Jetty and other Associated Works at Mongla Port” under Development Construction Ltd, Uttara Model Town, Dhaka-1230.

**LOCATION :** Mongla Port, Upazilla- Mongla, District- Bagerhat.

**GEOTECHNICAL RESEARCH DIRECTORATE  
SOIL MECHANICS AND GROUND WATER DIVISION**

**REPORT NUMBER: SOIL – 02(2023-24)**

**FY: 2023– 2024**

**RIVER RESEARCH INSTITUTE**

**FARIDPUR**

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## REPORT

### 1. INTRODUCTION

This report presents the results of soil tests carried out on the sub-surface soil samples collected from the location of Mongla Port, P. S. Mongla, Dist. Bagerhat in connection with “Testing of Soil Sample from Design and Build Jetty and other Associated Works at Mongla Port”. In this respect a total of 04(four) disturbed soil samples were received in the laboratory on 07.09.2023 from Development Construction Ltd, House # 11, Road # 19A, Sector # 4, Uttara Model Town, Dhaka-1230 vide their office Memo No. DCL/08/23/064, date. 31.08.2023.

### 2. LABORATORY TESTINGS & RESULTS:

**2.1 Grain Size Analysis:** The test was performed on the four samples and the grain size distribution curves have been shown in Attachment-I.


### 3. APPENDIX

**A:** Soil Testing Bill of this report no. Soil- 02 (2023-24).

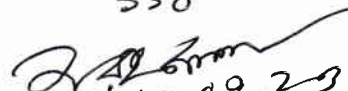
**B:** This is a list of research personnel associated with testing works, preparation and publication of the report.

**C:** Requisition letter for the work.

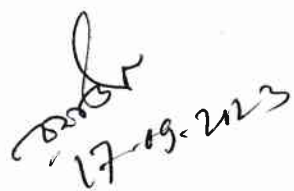
**Compiled by:**

  
17.09.2023  
SSO

**Checked by:**

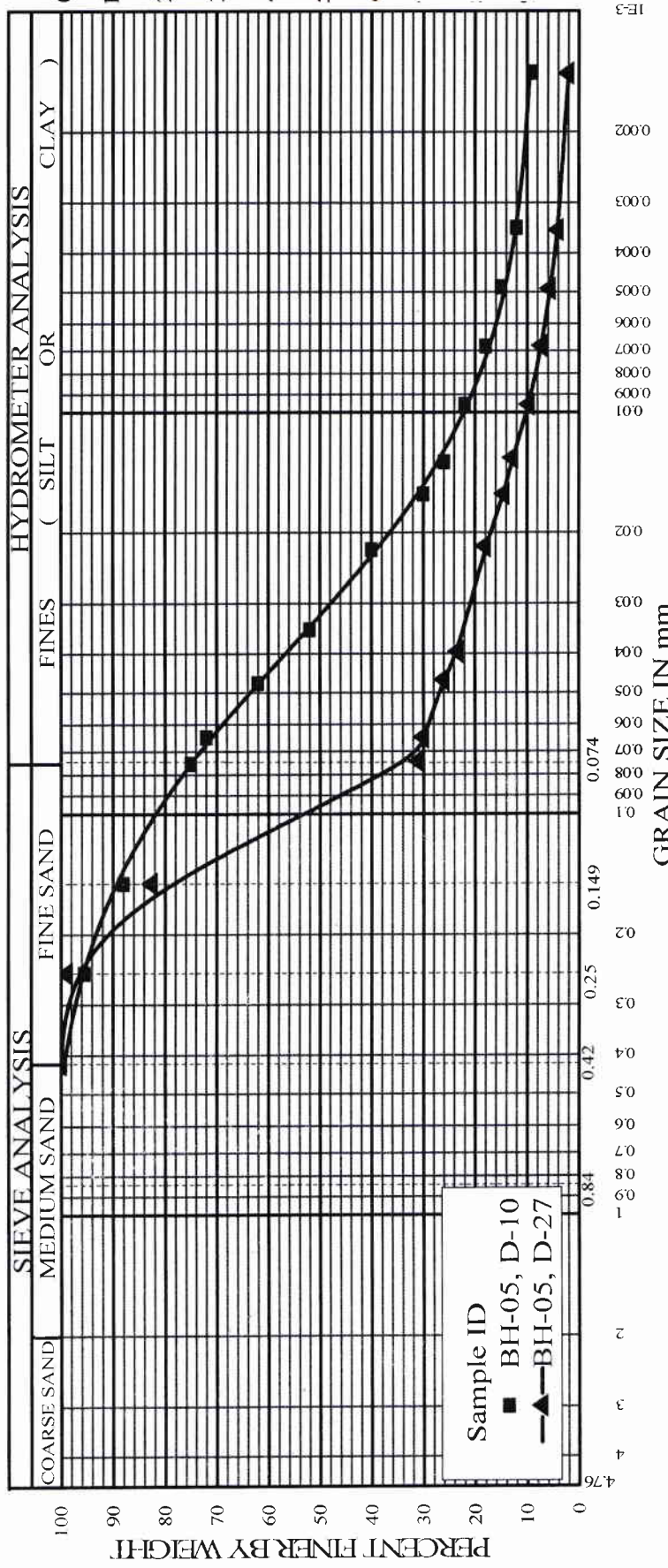
  
17.09.23  
PSO

**Recommended by:**

  
17-09-2023  
(Engr. Kazi Rezaul Karim)  
Director  
Geotechnical Research Directorate  
River Research Institute  
Faridpur

**RIVER RESEARCH INSTITUTE**  
**SOIL MECHANICS DIVISION**  
**GRADATION CURVE**

**Project:** Testing of Soil Sample from Design and Build Jetty and other Associated Works at Mongla Port.



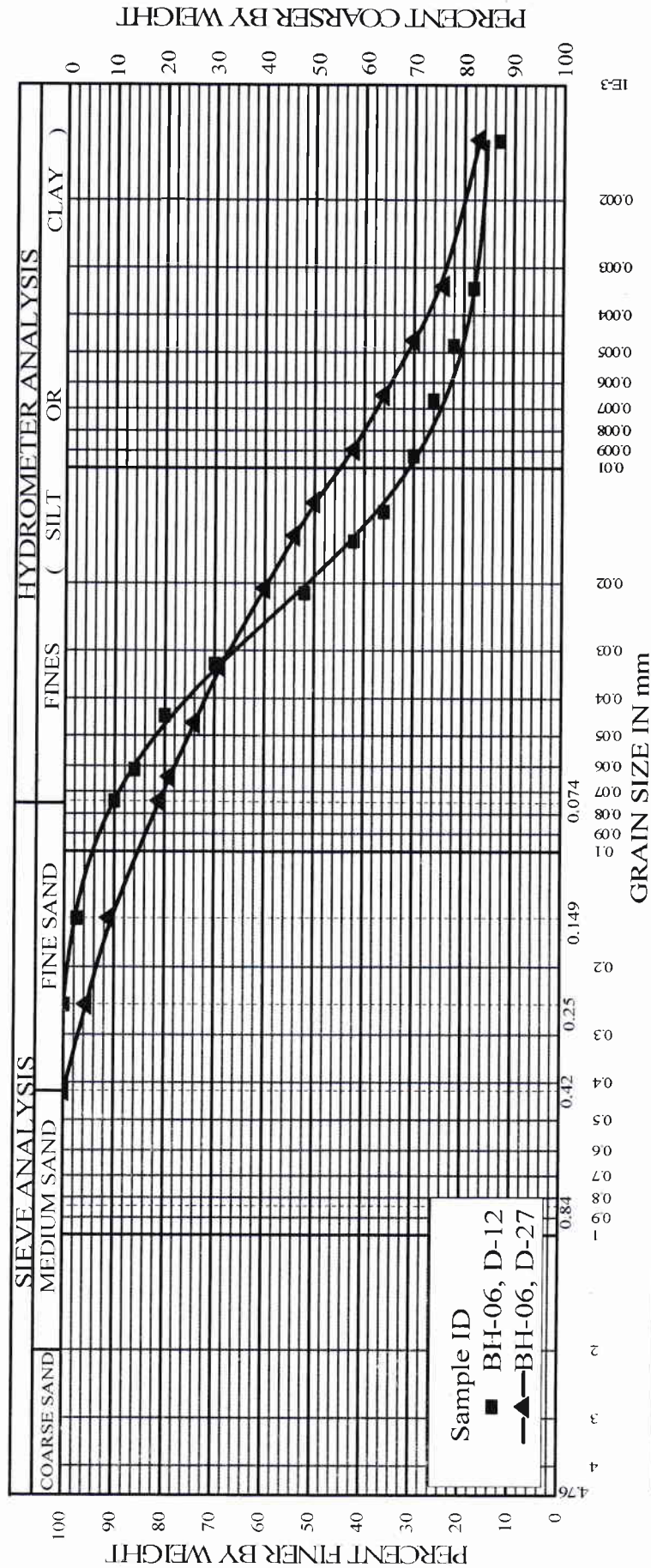
Location	Hole No.	Sample No.	Depth (m)	N.W.C.	LL	PI	Classification
Mongla Port	BH-05	D-10	15.00-15.45	--	--	--	Grey moist, SILT, some fine sand, medium compress.
Mongla Port	BH-05	D-27	40.50-40.95	--	--	--	Grey moist, FINE SAND, some silt, non plastic.

Tested by: *[Signature]* Compiled by: *[Signature]* Checked by: *[Signature]* Approved By: *[Signature]*

Unified Soil classification

**RIVER RESEARCH INSTITUTE  
SOIL MECHANICS DIVISION  
GRADATION CURVE**

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Location	Hole No.	Sample No.	Depth (m)	N.W.C.	LL	PI	Classification
Mongla Port	BH-06	D-12	18.00-18.45	--	--	--	Grey moist. CLAY, trace fine sand, medium plastic.
Mongla Port	BH-06	D-27	40.50-40.95	--	--	--	Grey moist. CLAY, little fine sand, medium plastic.

Tested by: *[Signature]*

Compiled by: *[Signature]*

Checked by: *[Signature]*

Approved By: *[Signature]*



**Appendix- A**  
**Soil Mechanics and Ground Water Division**  
**Geotechnical Research Directorate**  
**River Research Institute, Faridpur.**

**Soil Testing Bill**

Reference : His Memo no. DCL/08/23/064,

Date. 31.08.2023

Client : Development Construction Ltd, Uttara Model Town, Dhaka-1230.

Bill No. : Soil-02 (2023-24)

Project : Testing of Soil Sample from Design and Build Jetty and other Associated Works at Mongla Port.

Location: Mongla Port, Mongla, Bagerhat.

Report No.- Soil-02 (2023-24).

Date:- .09.2023

Sl. No.	Name of Soil Mechanics Tests	Rate (including all charges and VAT)	Nos of sample	Bill
1	2	3		
1	Specific Gravity (Gs.)	1725		
2	Natural Moisture Content	750		
3	Mechanical Analysis :			
	a) Visual Inspection & Classification			
	(i) Disturbed Sample	300		
	(ii) Undisturbed Sample	500		
	b) Sieve Analysis	2850	2	5700
	c) Hydrometer Analysis (Including Gs.)	2850		
	d) Sieve & Hydrometer Analysis (Including Gs.)	5250	2	10500
	e) Particle Size Analysis Particle Size Analyzer	6000		
4	Unit Weight	1500		
5	Loss-on-Ignition	3375		
6	Liquid Limit & Plastic Limit Combined	2475		
7	Shrinkage Limit	1275		
8	Consolidation Test (not excluding 6 loads + 2 unloads)	18750		
9	Direct Shear Test (3-point)	9750		
10	Triaxial Shear Test (for 3-specimen)			
	a) Unconsolidated Undrained	16500		
	b) Consolidated Undrained (without P.P.)	31500		
	c) Consolidated Undrained (with P.P.)	35250		
	d) Consolidated Drained Test	35250		
11	Vane Shear Test	8500		
12	Unconfined Compression Test/Remolded UCT	6000		
13	a) Standard AASHTO (4" dia mould)	9000		
	b) Standard AASHTO (6" dia mould)	9000		
	c) Modified AASHTO (4" dia mould)	11250		
	d) Modified AASHTO (6" dia mould)	11250		
	e) Field density per spot	4950		
	f) Field visit fee inside Faridpur	9750		
14	a) Permeability Test for Non-Cohesive Soils	6375		
	b) Permeability Test for Cohesive Soils	16500		
15	Density Index ( $I_d$ )	6000		
16	C.B.R. Test	16500		
17	Laboratory Boring Log (per sheet)	225		
18	Chemical test of soil ( $P^H+Cl^-+SO_4^{-2}$ )	1350		
19	Chemical test of water ( $P^H+Cl^-+SO_4^{-2}$ )	1350		
	Total (Taka)			16200.00
	(In words) Taka Sixteen Thousand and Two Hundred only.			

\*Charges include 10% Printing and Binding Cost, 10% Testing and Consultancy Fee and 15% VAT.

17.09.2023  
Senior Scientific Officer  
Geotechnical Research  
Directorate

17.9.23  
Principal Scientific Officer  
Geotechnical Research Directorate

17.09.2023  
Director (AC)  
Geotechnical Research  
Directorate

## APPENDIX-B

List of personnel responsible for testing works preparation and publication of the report

<b>Sl. No.</b>	<b>Name</b>	<b>Designation</b>
1.	Engr. Kazi Rezaul Karim	Director (AC)
2.	Engr. Md. Matiar Rahman Mondol	PSO
3.	Dr. Engr. Fatima Rukshana	PSO
4.	Mohammad Dulal Bawali	SSO
5.	Kazi Md.Shajahan	ST-C
6.	A.B.M Tazul Islam Bhuiyan	ST-B
7.	Md. Nazrul Islam	ST-B
8.	Md. Nuruzzaman	ST-B
9.	Abdul Jabbar	OA
10.	Md. Sayeed	OA
11.	Md. Jamal Uddin	OA
12.	Md. Billal Hossen	OA

Appendix: C



ডেভেলপমেন্ট কন্সট্রাকশনস লিঃ  
DEVELOPMENT CONSTRUCTIONS LTD.  
ENGINEERS & BUILDERS

Established in  
1972

Ref: DCL/08/23/064

Date: 31.08.2023

To  
The Director General  
River Research Institute (RRI)  
Faridpur.

Attention: Mr. Kazi Rezaul Karim, Chief Scientific Officer, River Research Institute  
(Soil Mechanics and Ground Water, Material Testing and Quality Control,  
Sediment, Chemical and Water Pollution Division) Faridpur.

Sub: Testing of Soil Sample from Design and Build Jetty and other Associated Works at  
Mongla Port.

Dear Sir,

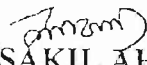
Kindly refer to the above. We are sending herewith Soil Sample and test schedule to be  
performed at your laboratory. All necessary charges for testing shall be paid by our company.

Test Schedule

SL	Borehole	Sample	Depth (m)	Test
1	BH-05	D-10	15.00m to 15.45m	Sieve Analysis
		D-27	40.50m to 40.95m	
2	BH-06	D-12	18.00m to 18.45m	Sieve Analysis
		D-27	40.50m to 40.95m	

We are kindly requesting your honor to perform the test and provide report within shortest  
possible time.

Thanking you,

  
(SAKIL AHMED)  
Engineer  
Development Constructions Ltd.  
Mobile: +880 1923 463556

PSC/SSC (Report Sect.)  
2023  
31/08/2023

Enclosed: Soil Sample 4 bags.